

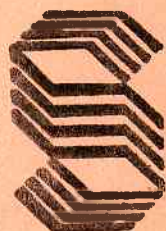
CAJA 1
CARPETA 4

Sección: Documentos Pertinencia
Carpeta 4

"THE FALKLANDS CAMPAIGN"
THE LESSONS

PRESENTED TO PARLIAMENT BY THE
SECRETARY OF ~~DEFENCE~~ STATE FOR
DEFENCE - DECEMBER 1982

- 3 COPIAS ENIGLES -



Cdo J Ej — EMGE
Jef II - Icia - Dpto Ext

(05)
532

Fecha-Hora recepción 220900 Feb 83

Destino Interno

1 2 3 4

Proceder

M

Nro

Fecha Hora

Recibido por

Verme previo estudio

1

Verme con antecedentes

2

Preparar contestación

3

Integrar al caso

4

Proponer acción a tomar

OBSERVACIONES

Tomar conocimiento

- Inf. al Sr J Dpto.

Coordinar

- Copia a Secr Cdo J Ej

Explotación y registro

X

Carta de Situación

Parte Subversivo

IIP

Reunión Informativa

Defundir a:

— Secr Grl

— B Icia 601

— FAA

— ARA

— Jef III - Op

— Dpto Int

J Dpto

Archivar

2do J Dpto

M-2341/83

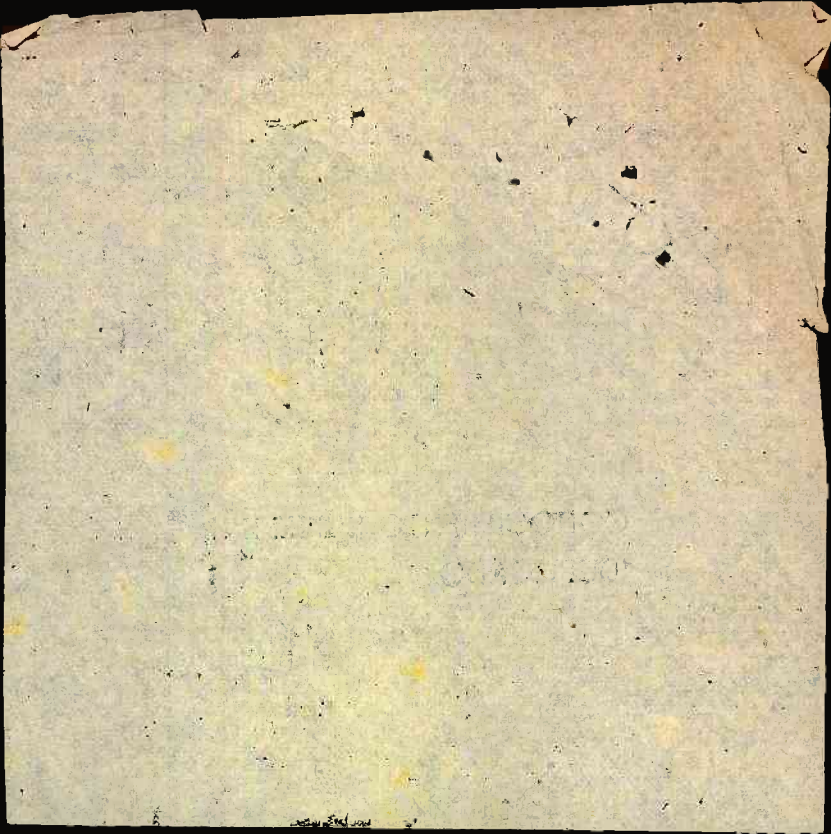
Ext. ~~one~~
1

one

CONOCIMIENTO SUBJEFE. II
(DUPLICADO)

[Signature]

1
Pasarle esta
copia a
Secret. Cdo Jefe.



SECRETO

Duplicado

CORREO DIPLOMATICO

BONN-RFA, 01 de febrero de 1983.

A13-0103/01.

OBJETO: Cumplimentar orden.

AL JEFE II - INTELIGENCIA (Cdo J Ej - EMGE).

De acuerdo a lo ordenado por Mensaje Nro 309/83 y continuando con lo informado por AMAL Nro 011/83 se adjunta texto completo del "FALKLAND ISLANDS REVIEW" (Informe Franks) de 106 páginas y el debate parlamentario del 18 de enero de 1983 (Volúmen 35 Nro 39) referido al mismo tema.

Asimismo se ha podido apreciar durante la última semana que la prensa en general se ha seguido ocupando del conflicto del Atlántico Sur a través de los comentarios que se hacen sobre el referido informe a saber:

- Se adjudica la responsabilidad del conflicto al Gobierno del Grl Galtieri y a la Junta Militar.
- Se considera en el Parlamento la necesidad de negociar con la Argentina para una solución definitiva.
- Se destaca que ya en 1977 Gran Bretaña envió un submarino atómico a las Islas Malvinas con orden de atacar para prevenir la invasión. Se le critica no haber hecho lo mismo a la Thatcher antes del 02 Abr 82.
- En el debate parlamentario se acusa al Gobierno por no haber encontrado el camino para una solución estable.
- El Gobierno Thatcher opina que no debe negociarse con la Argentina mientras los habitantes quieran seguir siendo británicos (idem para Hong Kong y Gibraltar).
- Quedaron preguntas sin contestar o respondidas ambiguamente para no perjudicar a los conservadores en las próximas elecciones.
- Se eximió a Thatcher de culpabilidad por 292 votos a favor y 240 en contra en la Cámara de los Comunes.

DOS: lo especificado en el texto.



RUBEN JOSE LORENZO

Coronel

Agregado Militar a la Embajada Argentina
en la República Federal de Alemania y Bélgica

SECRET
CONFIDENTIAL
CORRECTED

ALICE C. [unclear]
[unclear]

[Faint, mostly illegible text, likely bleed-through from the reverse side of the page. Some words like "ALICE" and "CONFIDENTIAL" are visible.]



Cdo J Ej — EMGE
Jef II - Icia - Dpto Ext

Fecha-Hora Recepción

08/11/83

Destino Interno

1 2 3 4

Proceder

Nro

Fecha Hora

Recibido por

Verme previo estudio

1

Verme con antecedentes

2

Preparar contestación

3

Integrar al caso

4

OBSERVACIONES

- Inf. al Sr. J. J. J.
- Preparar envío,

Proponer acción a tomar

Tomar conocimiento

Coordinar

Explotación y registro

Carta de Situación

Parte Subversivo

IIP

Reunión Informativa

Difundir a:

— Secr Grl

— B Icia 601

— FAA

— ARA

— Jef III - Op

— Dpto Int

J Dpto

Archivar

2do J Dpto

SECRETO

MEMORANDUM 67/0383

BUENOS AIRES, 08 de marzo de 1983.-

AL JEFE DEL ESTADO MAYOR GENERAL DEL EJERCITO (Jef II-Icia; Dpto Ext).

Con relación a su memorándum Ext M 2341/83, solicito a Ud quiera tener a bien ordenar ante quien corresponda se eleve a esta Secretaría General - Dpto II, copia del informe Franks y el debate parlamentario del 18 de enero de 1983 (Volúmen 35 Nro 39).

DDO GRL EJ
SECRETARIA
LETRA: 7
ESTAN: 6
NU: 1
DETALLE:
189
25

DO

N. M. Dasso

NALDO MIGUEL DASSO

CRONEL

DIRECTOR SECRETARIA GENERAL DEL EJERCITO

DISTRIBUIDOR:

Original.....Jef II-Icia
Duplicado.....Secr Grl Ej - Dpto II

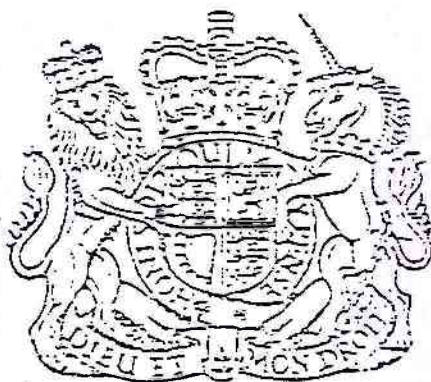
Pag 1-1
SECRETO

LETRA: 7 ESTAN: 6 NU: 1
DETALLE:

1. 1980-1981
 2. 1982-1983
 3. 1984-1985
 4. 1986-1987
 5. 1988-1989
 6. 1990-1991
 7. 1992-1993
 8. 1994-1995
 9. 1996-1997
 10. 1998-1999
 11. 2000-2001
 12. 2002-2003
 13. 2004-2005
 14. 2006-2007
 15. 2008-2009
 16. 2010-2011
 17. 2012-2013
 18. 2014-2015
 19. 2016-2017
 20. 2018-2019
 21. 2020-2021
 22. 2022-2023
 23. 2024-2025
 24. 2026-2027
 25. 2028-2029
 26. 2030-2031
 27. 2032-2033
 28. 2034-2035
 29. 2036-2037
 30. 2038-2039
 31. 2040-2041
 32. 2042-2043
 33. 2044-2045
 34. 2046-2047
 35. 2048-2049
 36. 2050-2051
 37. 2052-2053
 38. 2054-2055
 39. 2056-2057
 40. 2058-2059
 41. 2060-2061
 42. 2062-2063
 43. 2064-2065
 44. 2066-2067
 45. 2068-2069
 46. 2070-2071
 47. 2072-2073
 48. 2074-2075
 49. 2076-2077
 50. 2078-2079
 51. 2080-2081
 52. 2082-2083
 53. 2084-2085
 54. 2086-2087
 55. 2088-2089
 56. 2090-2091
 57. 2092-2093
 58. 2094-2095
 59. 2096-2097
 60. 2098-2099
 61. 2100-2101
 62. 2102-2103
 63. 2104-2105
 64. 2106-2107
 65. 2108-2109
 66. 2110-2111
 67. 2112-2113
 68. 2114-2115
 69. 2116-2117
 70. 2118-2119
 71. 2120-2121
 72. 2122-2123
 73. 2124-2125
 74. 2126-2127
 75. 2128-2129
 76. 2130-2131
 77. 2132-2133
 78. 2134-2135
 79. 2136-2137
 80. 2138-2139
 81. 2140-2141
 82. 2142-2143
 83. 2144-2145
 84. 2146-2147
 85. 2148-2149
 86. 2150-2151
 87. 2152-2153
 88. 2154-2155
 89. 2156-2157
 90. 2158-2159
 91. 2160-2161
 92. 2162-2163
 93. 2164-2165
 94. 2166-2167
 95. 2168-2169
 96. 2170-2171
 97. 2172-2173
 98. 2174-2175
 99. 2176-2177
 100. 2178-2179
 101. 2180-2181
 102. 2182-2183
 103. 2184-2185
 104. 2186-2187
 105. 2188-2189
 106. 2190-2191
 107. 2192-2193
 108. 2194-2195
 109. 2196-2197
 110. 2198-2199
 111. 2200-2201
 112. 2202-2203
 113. 2204-2205
 114. 2206-2207
 115. 2208-2209
 116. 2210-2211
 117. 2212-2213
 118. 2214-2215
 119. 2216-2217
 120. 2218-2219
 121. 2220-2221
 122. 2222-2223
 123. 2224-2225
 124. 2226-2227
 125. 2228-2229
 126. 2230-2231
 127. 2232-2233
 128. 2234-2235
 129. 2236-2237
 130. 2238-2239
 131. 2240-2241
 132. 2242-2243
 133. 2244-2245
 134. 2246-2247
 135. 2248-2249
 136. 2250-2251
 137. 2252-2253
 138. 2254-2255
 139. 2256-2257
 140. 2258-2259
 141. 2260-2261
 142. 2262-2263
 143. 2264-2265
 144. 2266-2267
 145. 2268-2269
 146. 2270-2271
 147. 2272-2273
 148. 2274-2275
 149. 2276-2277
 150. 2278-2279
 151. 2280-2281
 152. 2282-2283
 153. 2284-2285
 154. 2286-2287
 155. 2288-2289
 156. 2290-2291
 157. 2292-2293
 158. 2294-2295
 159. 2296-2297
 160. 2298-2299
 161. 2300-2301
 162. 2302-2303
 163. 2304-2305
 164. 2306-2307
 165. 2308-2309
 166. 2310-2311
 167. 2312-2313
 168. 2314-2315
 169. 2316-2317
 170. 2318-2319
 171. 2320-2321
 172. 2322-2323
 173. 2324-2325
 174. 2326-2327
 175. 2328-2329
 176. 2330-2331
 177. 2332-2333
 178. 2334-2335
 179. 2336-2337
 180. 2338-2339
 181. 2340-2341
 182. 2342-2343
 183. 2344-2345
 184. 2346-2347
 185. 2348-2349
 186. 2350-2351
 187. 2352-2353
 188. 2354-2355
 189. 2356-2357
 190. 2358-2359
 191. 2360-2361
 192. 2362-2363
 193. 2364-2365
 194. 2366-2367
 195. 2368-2369
 196. 2370-2371
 197. 2372-2373
 198. 2374-2375
 199. 2376-2377
 200. 2378-2379
 201. 2380-2381
 202. 2382-2383
 203. 2384-2385
 204. 2386-2387
 205. 2388-2389
 206. 2390-2391
 207. 2392-2393
 208. 2394-2395
 209. 2396-2397
 210. 2398-2399
 211. 2400-2401
 212. 2402-2403
 213. 2404-2405
 214. 2406-2407
 215. 2408-2409
 216. 2410-2411
 217. 2412-2413
 218. 2414-2415
 219. 2416-2417
 220. 2418-2419
 221. 2420-2421

• (Date of birth - 1950-01-01) (Name - JAMES EARL RAY) (Address - 1000 1st St. N. Minneapolis, Minn. 55401) (Occupation - Lawyer)

En la ciudad de San Francisco, California, a los 15 días del mes de mayo de 1963, yo, el suscrito, Jefe de la Oficina de la Guardia Nacional, en virtud de las facultades que me confiere el artículo 11 del Reglamento de la Guardia Nacional, hago saber a todos los que esta cédula viera, que el Sr. [Nombre] ha sido designado para el cargo de [Cargo] en la [Entidad] y que esta designación es definitiva y no sujeta a revocación.



FRANKS

The Falklands Campaign: The Lessons

*Presented to Parliament by the Secretary of State for Defence
by Command of Her Majesty
December 1982*

LONDON

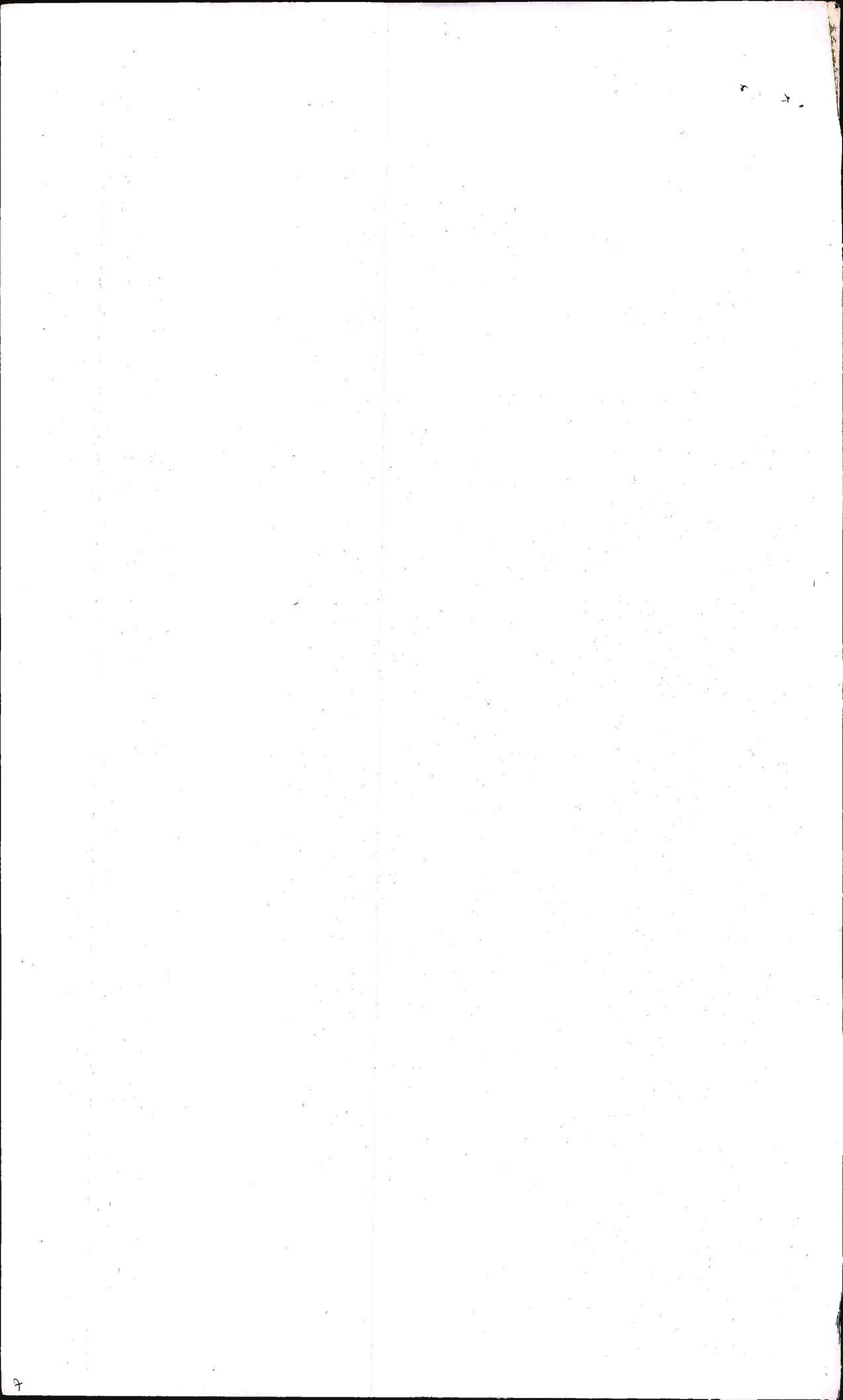
HER MAJESTY'S STATIONERY OFFICE

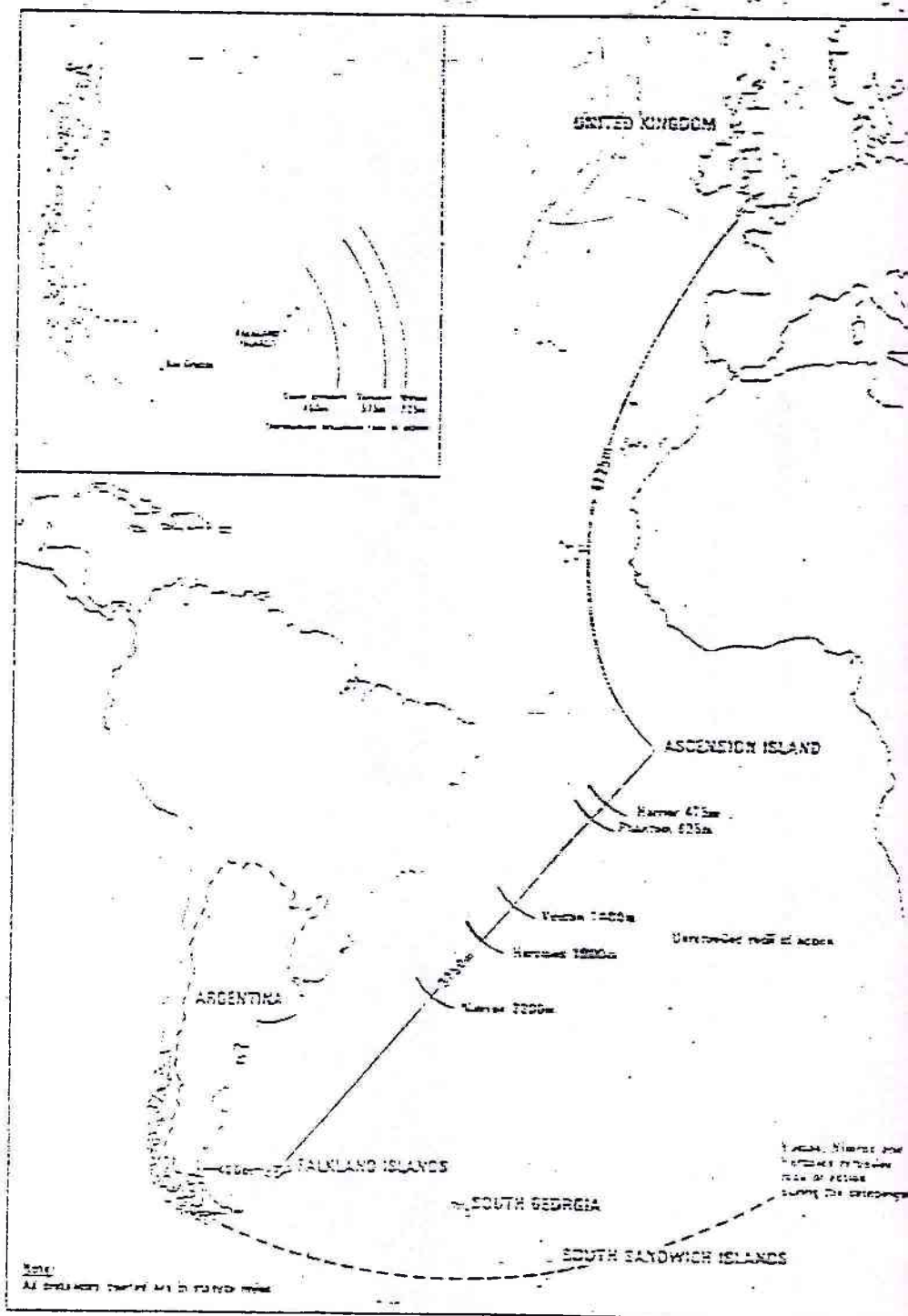
£3.95 net

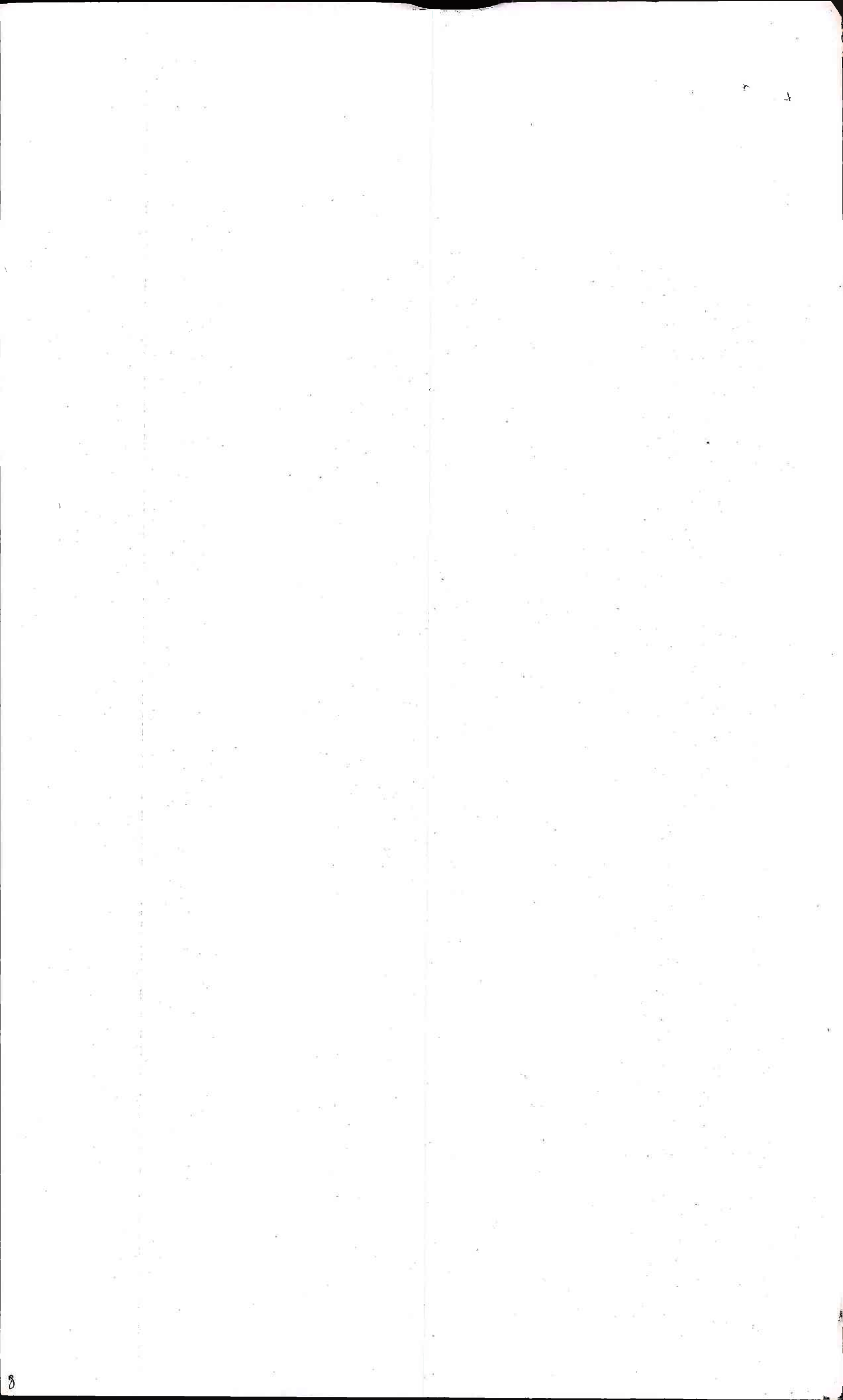
Cmsd. 8758

Contents

	Page
Part 1. The Operation	5
Deployment	6
From South Georgia to San Carlos	7
From San Carlos to Fitzroy	10
Advance on Port Stanley	12
Chronology	13
Part 2. The Lessons	15
Introduction	15
Crisis Management and Command and Control	15
Men	16
Maritime Operations	16
Land Operations	17
Special Forces	17
Equipment	18
Procurement and Improvisation	24
Logistics and Personnel	25
Public Relations	28
Part 3. The Future	31
Conclusion	35
Annexes	
A. Composition of the task force and supporting elements:	
Table 1—Ships of the Royal Navy	37
Table 2—Squadrons of the Fleet Air Arm	38
Table 3—Ships of the Royal Maritime Auxiliary Service	39
Table 4—Ships of the Royal Fleet Auxiliary	39
Table 5—Ships taken up from trade	40
Table 6—Royal Marines	41
Table 7—Army Units	42
Table 8—Royal Air Force Units	44
B. Weapons systems performance against enemy aircraft	45
C. Ship and aircraft losses	46







Part 1

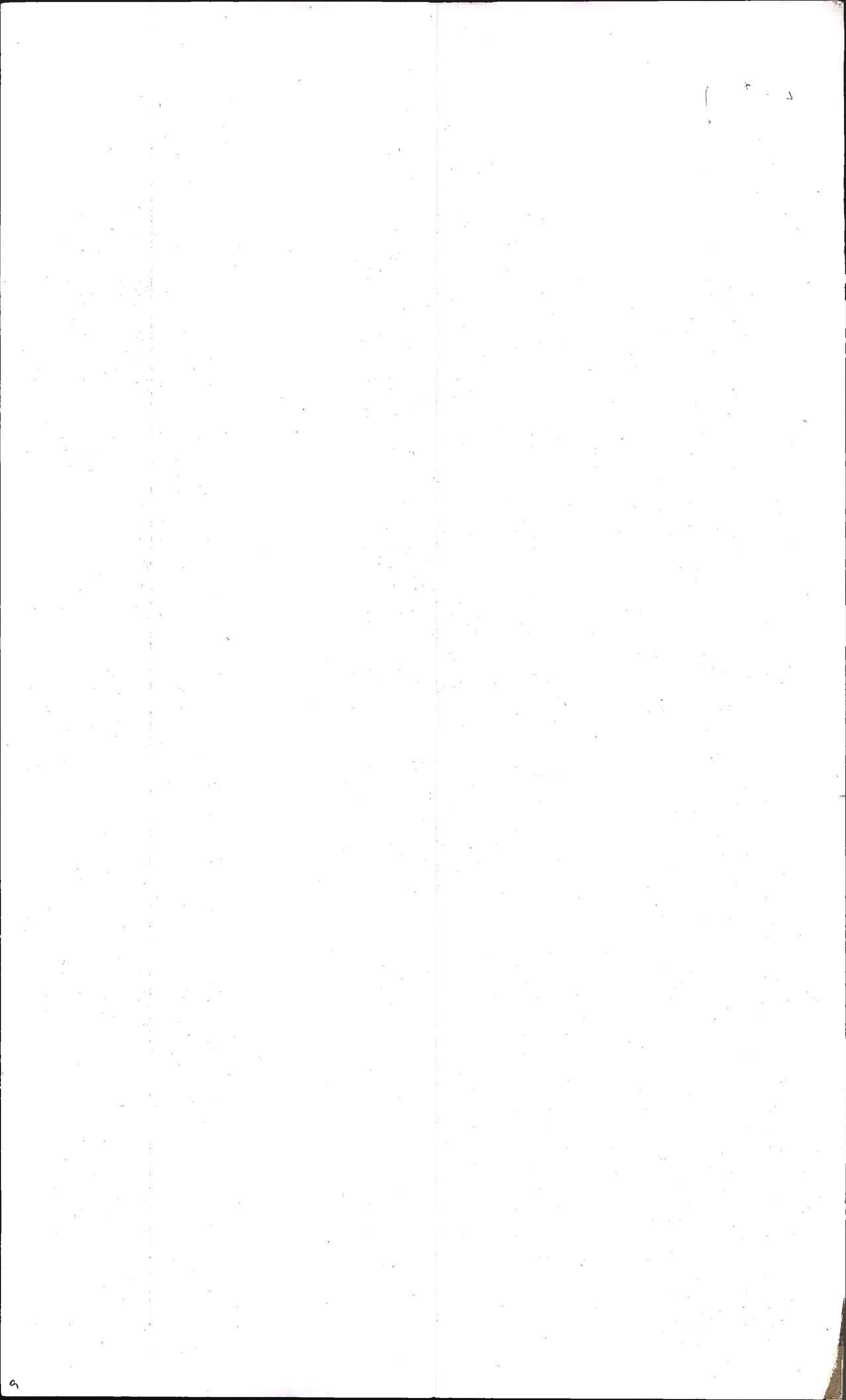
The Operation

101. On 2 April 1982 in an act of unprovoked aggression against British sovereign territory and British people Argentine forces invaded the Falkland Islands. The next day they invaded South Georgia. These invasions were launched despite urgent calls upon the Argentine Government from the President of the USA, the President of the United Nations (UN) Security Council and the Secretary General of the UN to desist from military action. The invasion was immediately condemned by the UN Security Council in its Resolution 502. That Resolution went on to call for an immediate withdrawal of the Argentine forces occupying the Falkland Islands, and for a peaceful settlement of the dispute.

102. The Government made clear from the first its willingness to accept and abide by Resolution 502. We engaged in intense and prolonged diplomatic activity in pursuit of a peaceful solution. But we could not depend upon it. We therefore took military steps intended to put pressure on Argentina to withdraw and to make possible our repossession of the Islands by force if that should ultimately prove necessary. Three days after the invasion HMS *Hermes* and HMS *Invincible* left the United Kingdom to head what was to become the largest task force in recent history.

103. While diplomatic efforts continued the net was gradually drawn more tightly around the Argentine garrison on the Falklands. On 12 April we imposed a maritime exclusion zone of 200 miles around the Falklands against Argentine naval ships. On 23 April we warned that any approach by Argentine forces which could amount to a threat to interfere with the mission of British forces in the South Atlantic would be dealt with appropriately. On 25 April the task force repossessed South Georgia. The recapture of South Georgia dealt a psychological blow to the Argentine Government and provided clear evidence of the United Kingdom's resolve and willingness to resort to military action if all other courses were closed. It also gave the task force an anchorage in the South Atlantic. On 29 April we warned that all Argentine vessels shadowing the task force would be liable to attack. Despite this increasing military pressure, however, Argentina showed no signs of yielding on any points which could make negotiations possible.

104. We took further measures: on 30 April a total exclusion zone was imposed; on 1 May Port Stanley airfield was bombed; and on 7 May we warned that any Argentine warship or military aircraft over 12 miles from the Argentine coast would be treated as hostile. Even at this stage the way was open for the Argentine Government to accept a peaceful withdrawal of their troops. They declined, and it became clear that the Falklands would have to be retaken by force.



105. The first major landing on the Falkland Islands was made at San Carlos Water on the night of 20/21 May. In the actions which followed there were inevitably setbacks and casualties. Nevertheless, just over three weeks later Major General Moore, the Land Force Commander, accepted the surrender of General Menendez and his force at Port Stanley. It was by any standards a brilliant campaign, marked by exceptional logistic planning and improvisation, and carried through with outstanding skill and fortitude.¹

Deployment

106. To despatch a task force in such a short space of time was a remarkable achievement. It was the result of close cooperation between the Services, the Merchant Navy, the Royal Dockyards and commercial ports, the stores and transport organisations of the Ministry of Defence, and Industry. The task force had to be stocked and provisioned for at least three months at sea. Many of the merchant ships required extensive modification to prepare them for their new rôle. Eventually over 110 ships were deployed.² These included 44 warships; 22 from the Royal Fleet Auxiliary (RFA); and 45 merchant ships whose civilian crews were all volunteers.

107. The Falkland Islands lie 3,000 miles south-west of the United Kingdom and over 3,500 miles from Ascension Island; but only 400 miles from the Argentine mainland. The task force needed to be self-sufficient in food, water, fuel, ammunition and all the other military equipment it might require. Sound transport and logistic arrangements were vitally important. The ships of the RFA and the Merchant Navy and the Royal Air Force's transport aircraft were to be the task force's lifeline. Merchant shipping alone transported 9,000 personnel, 100,000 tons of freight and 95 aircraft to the South Atlantic. The supply chain carried 400,000 tons of fuel. RFA support ships transferred ammunition, dry cargo and fuel on some 1,200 occasions, in addition to more than 300 helicopter transfers. British forces established a joint forward operating base at Ascension Island. The Royal Air Force moved over 5,300 people and 6,500 tons of stores through Ascension Island in more than 600 sorties by Hercules and VC10 aircraft. Hercules aircraft also made some 40 supply drops to the task force, which entailed mid-air refuelling in round-trips lasting, in many cases, over 25 hours. This massive logistic effort enabled the warships and the aircraft of the task force to operate continuously without returning to distant bases for provisions.

108. In the space of seven weeks a task force of 28,000 men and over 100 ships had been assembled, sailed 8,000 miles, effectively neutralised the Argentine navy and fought off persistent and courageous attacks from combat aircraft which outnumbered its own by more than six to one. This in itself was no mean feat, but the task force then put ashore 10,000 men on a hostile coast while under threat of heavy air attack; fought several pitched battles against an entrenched and well supplied enemy who at all times outnumbered our forces; and brought them to surrender within three and a half weeks.

Note:

¹ Details of the composition of the task force and supporting elements are given in Annex A.

From South Georgia to San Carlos

109. The first action at sea took place off South Georgia when on 25 April the Argentine submarine *Santa Fe* was attacked on the surface some five miles from the main harbour at Grytviken. She was badly damaged and subsequently beached. The same day the Island was repossessed by Royal Marines and Special Forces (which comprise the Special Air Service (SAS) and the Special Boat Squadron (SBS) of the Royal Marines (RM)). On 1 May a Valiant followed by Sea Harriers carried out their first attacks on the Falklands, and the first Argentine aircraft were shot down. The carrier group made a major demonstration of force, simulating an amphibious landing off Port Stanley which successfully drew the Argentines and revealed some of their defensive positions.

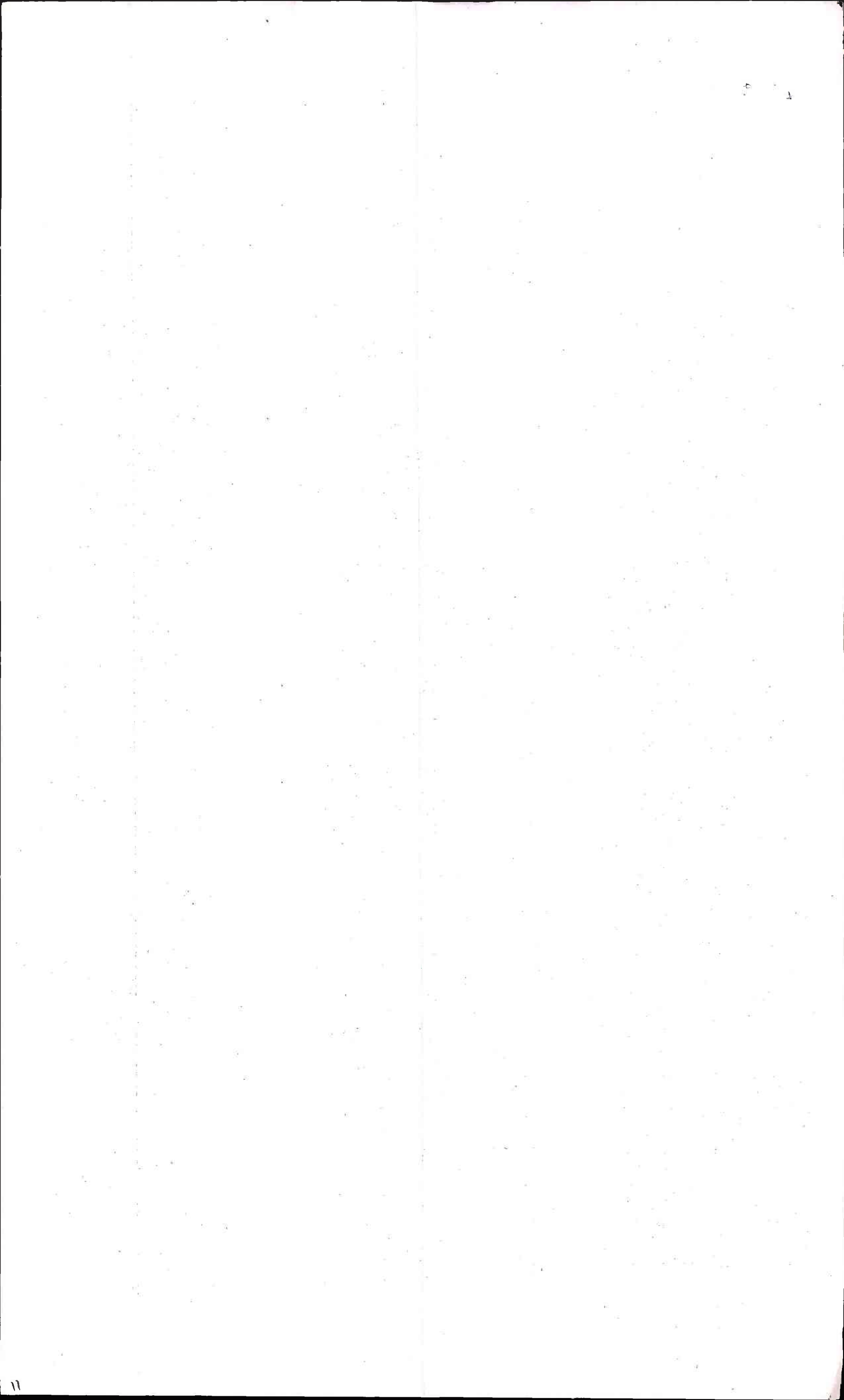
110. On 2 May HMS *Conqueror* detected the Argentine cruiser, *General Belgrano*, accompanied by two destroyers, sailing near to the total exclusion zone. Other Argentine ships were also thought to be probing our defences to the north of the zone. The *Belgrano*, and her escorts armed with Exocet missiles, posed a clear threat to the ships of the task force. She was therefore attacked and sunk by torpedoes. Thereafter major Argentine warships remained within 12 miles of the Argentine coast and took no further part in the Campaign. Argentine submarines continued to pose a serious threat, but no task force ships were successfully attacked.

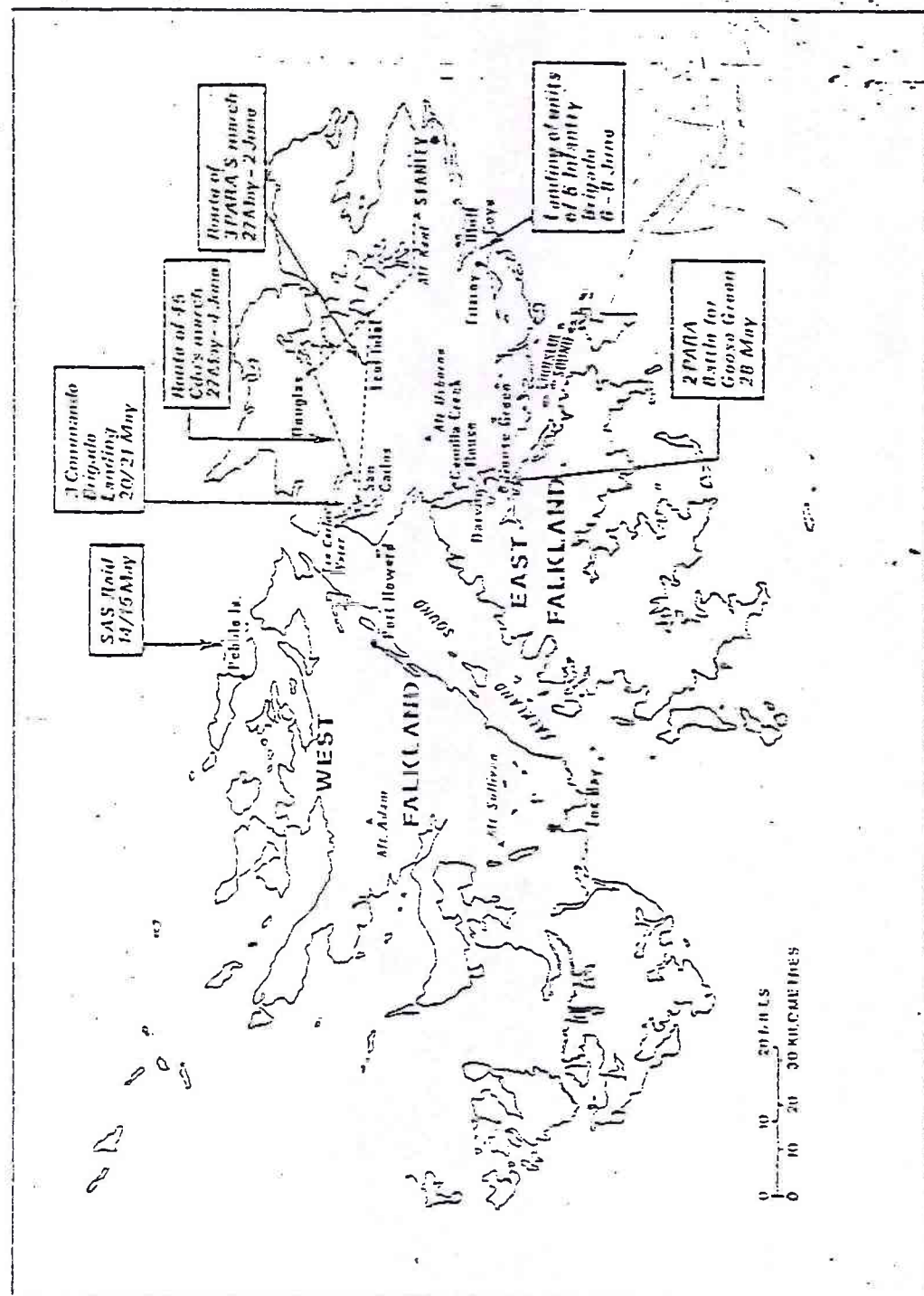
111. The task force suffered its first major loss on 4 May. HMS *Sheffield*, while on forward radar picket duty, was hit by an Exocet missile launched from an Argentine Super Etendard aircraft. The missile hit fuel tanks amidships and serious fires started, which filled the central section of the ship with acrid smoke. After nearly four hours, with the fires increasing in intensity, the Captain gave orders to abandon ship. 20 members of her crew died.

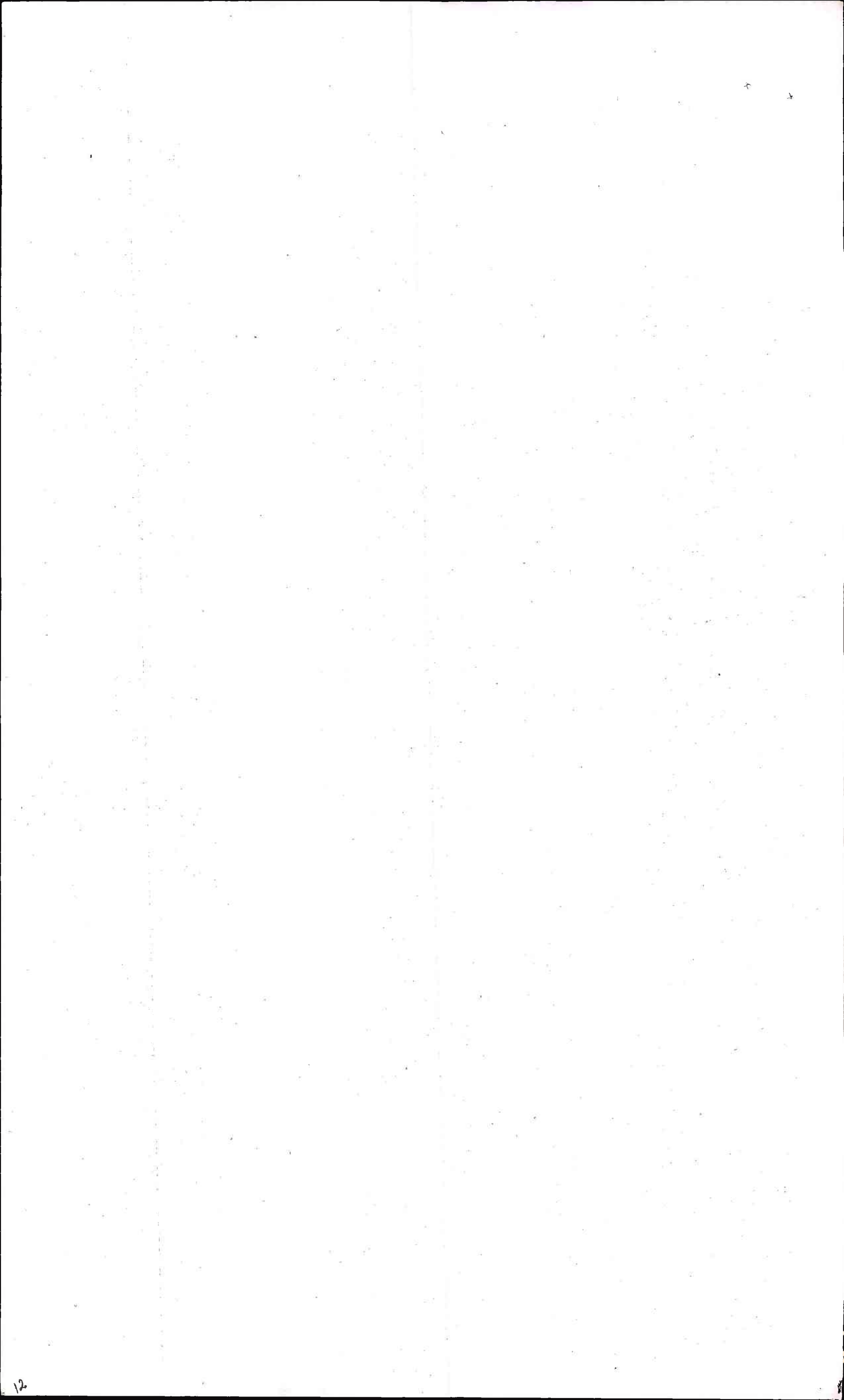
112. By mid-May the task force had accomplished two of its main tasks: the movement of the troops safely to the South Atlantic and the establishment of control of the seas around the Islands. The rôle of the carriers, HMS *Hermes* and HMS *Invincible*, was crucial at this and subsequent stages in providing air defence and the means of attacking enemy ships and ground positions, while their helicopters provided constant anti-submarine protection.

113. It was now necessary to put land forces ashore in sufficient strength to repossess the Islands. San Carlos was chosen as the site for the amphibious landing because it offered a good anchorage which could be protected against submarine attack and was an area known to be lightly defended by the enemy and difficult for him to reinforce rapidly. The low hills surrounding the inlet afforded good protection against the risk of Exocet attack. Men of the SAS and the SBS had for some time been reconnoitering East and West Falkland. Taking advantage of the intelligence they had gained, and under cover of a Naval bombardment, the SAS carried out a daring night raid on Pebble Island on 15 May. They destroyed 11 Argentine aircraft on the ground.

114. On 20 May the main amphibious force moved towards San Carlos Water, taking advantage of an overcast sky and poor visibility, and keeping strict radio silence. Meanwhile Special Forces mounted a series of diversionary raids at various points around East Falkland. Under cover of Naval gunfire,







men of the 3rd Commando Brigade RM (3 Cdo Bde), including the 2nd and 3rd Battalions, the Parachute Regiment (2 PARA and 3 PARA), embarked in their landing craft and headed for the shore. The landing was made over four beaches. Helicopters operated continuously, moving stores and helping to establish the beach-head. The operation achieved complete tactical surprise. 5,000 men were safely landed, and what little opposition there was quickly collapsed. British losses in this phase were two helicopters and their crews.

115. The next morning brought clear blue skies, but the landing force had won a vital few hours to establish defensive positions and begin to set up their Rapier fire units. At mid-day the Argentine air force began a series of fierce and protracted attacks against the beach-head and the ships supporting it.

116. The Sea Harriers on combat air patrol provided the outer layer of defence. The second layer was provided by a pair of ships known as the 'missile trap', positioned off the northern entrance to Falkland Sound. These were usually a Type 42 destroyer armed with Sea Dart and a Type 23 frigate with Sea Wolf. The next layer of defence, which became known as the 'gunline', was a group of three or four ships inside the entrance to the Sound using every gun and missile system they possessed to fight off the incoming Argentine aircraft. Finally within the anchorage itself (nicknamed 'bomb alley'), where there were often up to eight troop or stores ships at any one time, the small calibre guns and Sea Cat missiles from the assault ships, HMS *Intrepid* and HMS *Fearless*, together with Blowpipe missiles, machine guns and notably the Rapier fire units on shore provided the final layer of defence.

117. The Argentine pilots were courageous and persistent in their attacks and ships of the task force suffered loss and damage during the first few days after the landing. On the 'gunline' we lost HMS *Ardent* and HMS *Antelope* on 21 and 23 May; 24 men died. Six other ships were damaged between 21 and 24 May. But the Argentines paid a heavy price. On 21 May British forces shot down some 15 attacking aircraft. When attacks resumed on 23 May, 10 attacking aircraft were destroyed; on 24 May a further 18 were shot down.

118. On 25 May, Argentina's National Day, the Argentine air force made a major effort against the task force. HMS *Covenry* had been in the 'missile trap' to the north-west and had successfully controlled Sea Harriers and shot down three aircraft herself. She was attacked at low level by waves of Skyhawk aircraft which overwhelmed her defences. She capsized quickly. Survivors were rescued by HMS *Broadsword* and helicopters; 19 men died. Air attacks on the beach-head now became much less frequent and British forces were safely established ashore. The battle of San Carlos had been won.

119. Away from the beach-head air attacks continued. On 25 May the merchant ship, *Atlantic Conveyor*, which had delivered Harriers to the task force and was carrying much needed supplies, including helicopters, was north-east of the Falklands. Two Exocet missiles, launched from Argentine Super Etendard aircraft, hit the *Atlantic Conveyor*. The ship was set on fire. The fire spread rapidly and the ship was abandoned with the loss of 12 lives. A third attack on the task force by air-launched Exocet on 30 May was successfully countered.

From San Carlos to Fitzroy

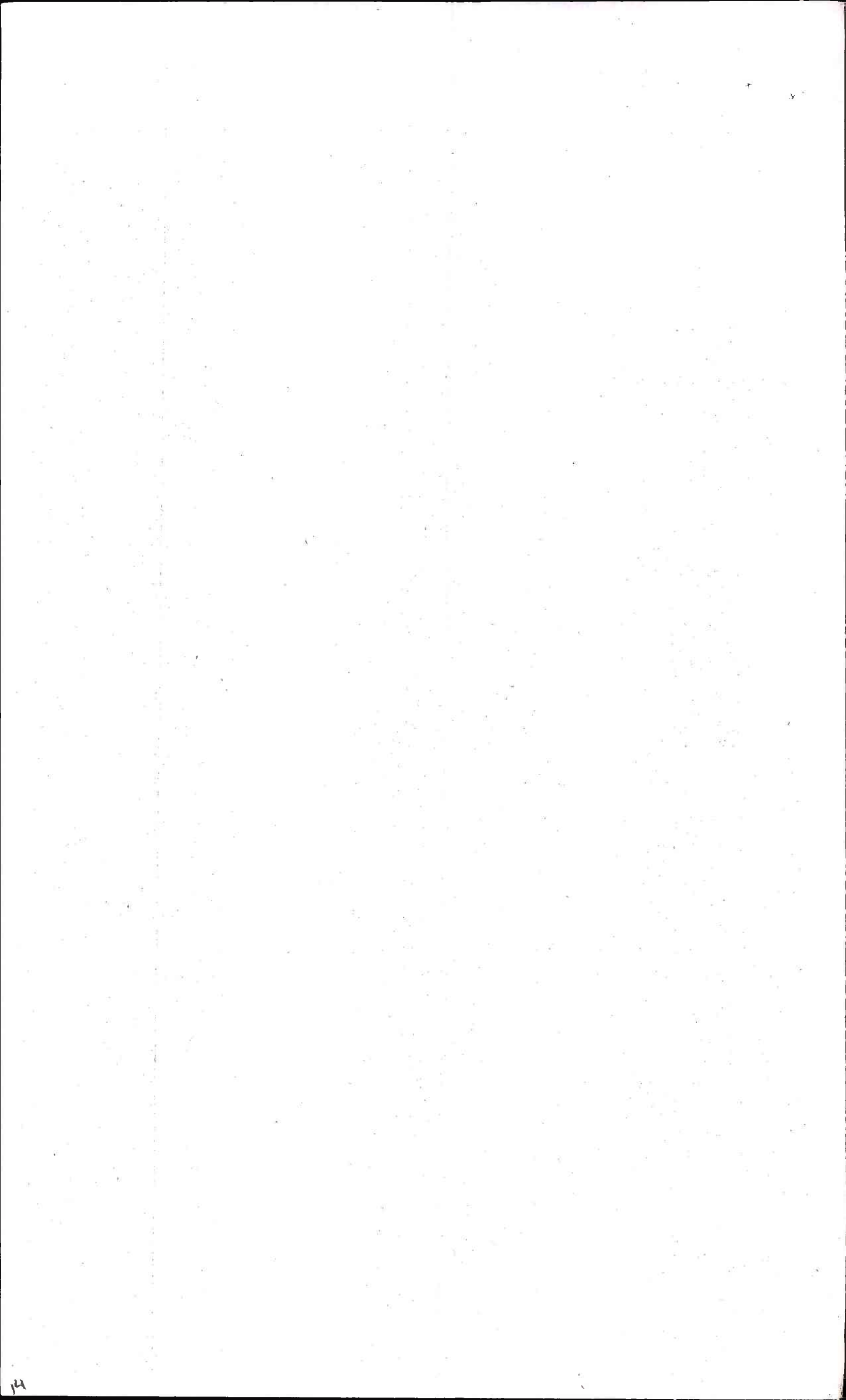
120. With the establishment of a firm bridge-head the advance on Port Stanley became the next objective. One threat to the flank of any attack on Port Stanley lay in the significant Argentine garrison and airfield at Darwin and Goose Green. 2 PARA was given the task of removing that danger and seeking an early victory. Overnight on 26/27 May one company of 2 PARA secured Camilla Creek House. After a 12 mile night approach march the rest of the battalion joined them and lay up for the day. An artillery troop of three 105mm light guns was flown into position to assist in the impending assault which started at 0200 hours on 28 May.

121. 2 PARA began by attacking Darwin, supported by Naval gunfire. The settlement was secured by mid-afternoon but the battalion was then faced with an advance on Goose Green, where the enemy were dug into strong defensive positions which had to be approached across the open ground of a narrow isthmus. Harrier aircraft were called in to attack the Argentine positions. The battalion was attacked by Pucara light aircraft from Goose Green, one of which was shot down by a Blowpipe missile. The battalion eventually overcame stiff resistance and pushed the enemy back into the settlement. A timely strike by the Harriers considerably helped the progress of the paratroopers and the next day the Argentine commander surrendered. British dead totalled 17.

122. Besides securing the flank the battle was significant for two reasons. First it gave us a chance to assess the fighting qualities of the enemy. Second, and more importantly, by their outstanding performance against a numerically superior enemy 2 PARA established a psychological ascendancy over the Argentines which our forces never lost.

123. In the course of a remarkable march of 30 miles over difficult terrain in inhospitable conditions, 45 Cdo and 3 PARA secured Douglas Settlement and Teal Inlet on 30 May. Meanwhile the SAS had established a patrol base forward on Mount Kent. 42 Cdo, making best use of the helicopter lift available, leap-frogged forward to secure Mount Kent and Mount Challenger, the western approaches to Port Stanley. On the same day Major General Moore assumed command of all land operations. The 5th Infantry Brigade (5 Bde) came ashore on 1 June.

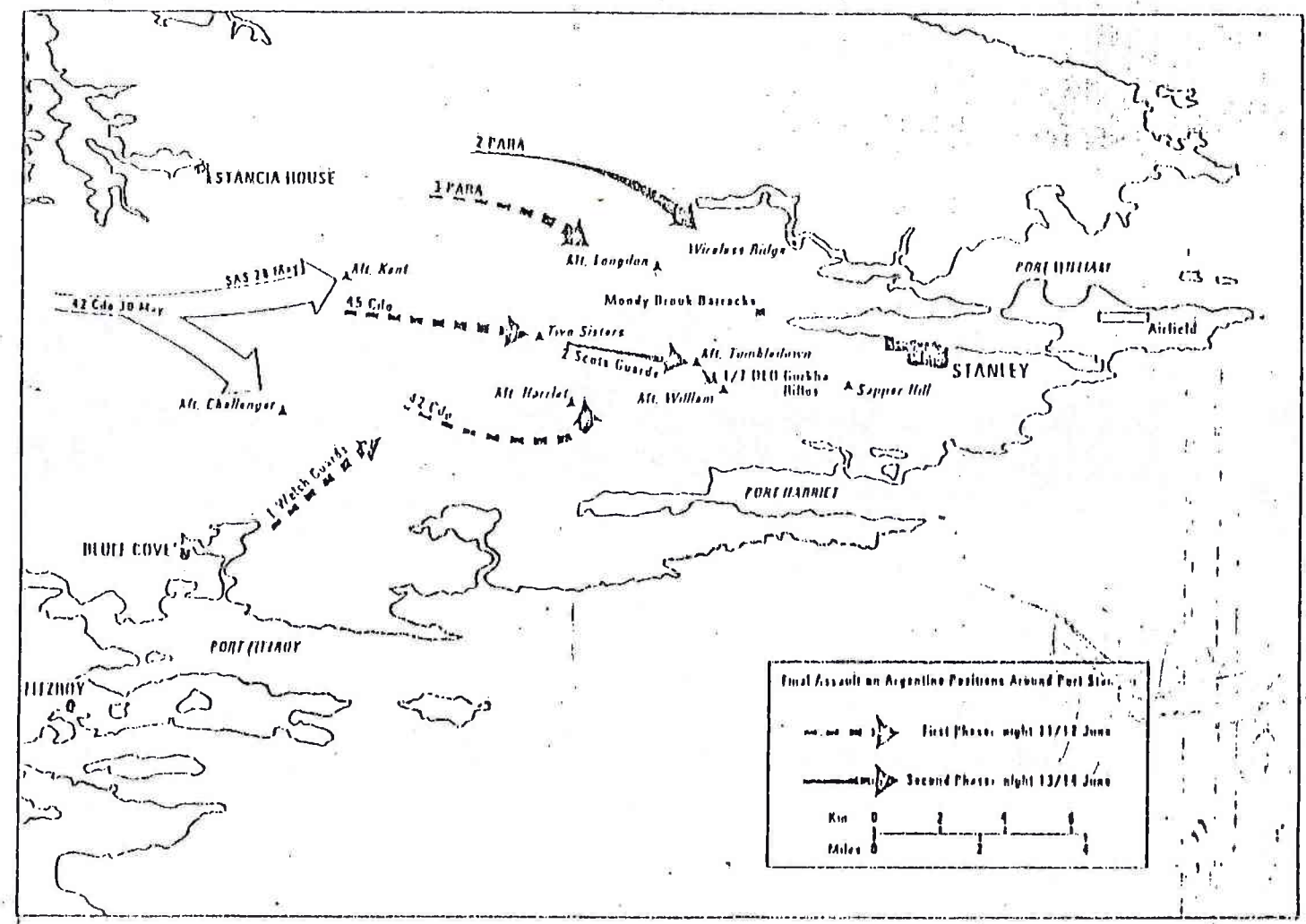
124. The Land Force Commander decided to press on quickly with the advance on Port Stanley and to commit 5 Bde to the South. When it was discovered that the Argentines had evacuated Fitzroy settlement 2 PARA moved forward rapidly to secure the area, which was an important point in the advance on Stanley. The 1st Battalion 7th Duke of Edinburgh's Own Gurkha Rifles and the rest of 2 PARA advanced by sea and by air while the 2nd Battalion Scots Guards, the 1st Battalion Welsh Guards and logistic support units were transported to Fitzroy by sea. The loss of Chinook helicopters on the *Atlantic Conveyor* had effectively precluded the option of air-lifting the bulk of 5 Bde. Passage by sea was therefore the only way to move forward quickly, maintaining the impetus of the advance and minimising the risk of Argentine counter-attack. On the nights 5/6 and 6/7 June the Scots Guards and elements of the Welsh Guards were successfully moved by HMS *Intrepid* and HMS *Fearless*.



314485

11

2-2



The deployment of the balance of the Welsh Guards was thwarted by appalling weather. On the night 7/8 June RFA *Sir Galahad* was despatched with support units and the remaining Welsh Guards. On 8 June the cloud lifted and, before the final elements had been disembarked from the landing ships, RFA *Sir Galahad* and RFA *Sir Tristram* were hit by an air strike at Fitzroy. Both ships were abandoned. The *Sir Galahad*, which had a large number of men on-board, was burnt out. 50 men lost their lives, of whom 32 were from the 1st Battalion Welsh Guards. The courageous efforts of the helicopter pilots and rescue boat crews, who took their craft again and again into the flames and blinding smoke rising from the stricken vessel, prevented greater loss of life. But for the bravery of the seamen and the dedication of all those who assisted ashore the loss of life would have been much greater. Later that day a pair of patrolling Sea Harriers destroyed four Mirages over Choiseul Sound.

Advance on Port Stanley

125. Despite previous set-backs through loss of men and equipment, particularly helicopters, the first phase of the main battle for Port Stanley began on 11/12 June when 3 Cdo Bde mounted a three battalion night attack. Simultaneously targets further to the east were bombarded by Naval vessels. As a result of vigorous and aggressive patrolling the troops were able to achieve initial surprise, and after a night of stiff fighting 3 PARA took Mount Longdon, 45 Cdo captured Two Sisters, and 42 Cdo captured Mount Harriet. British casualties were 22 killed and 44 wounded. Throughout the following day, all these positions came under considerable enemy artillery fire, causing more casualties. The shelling was not, however, all one way: the Argentine defences were heavily bombarded by our own artillery and at night by Naval guns.

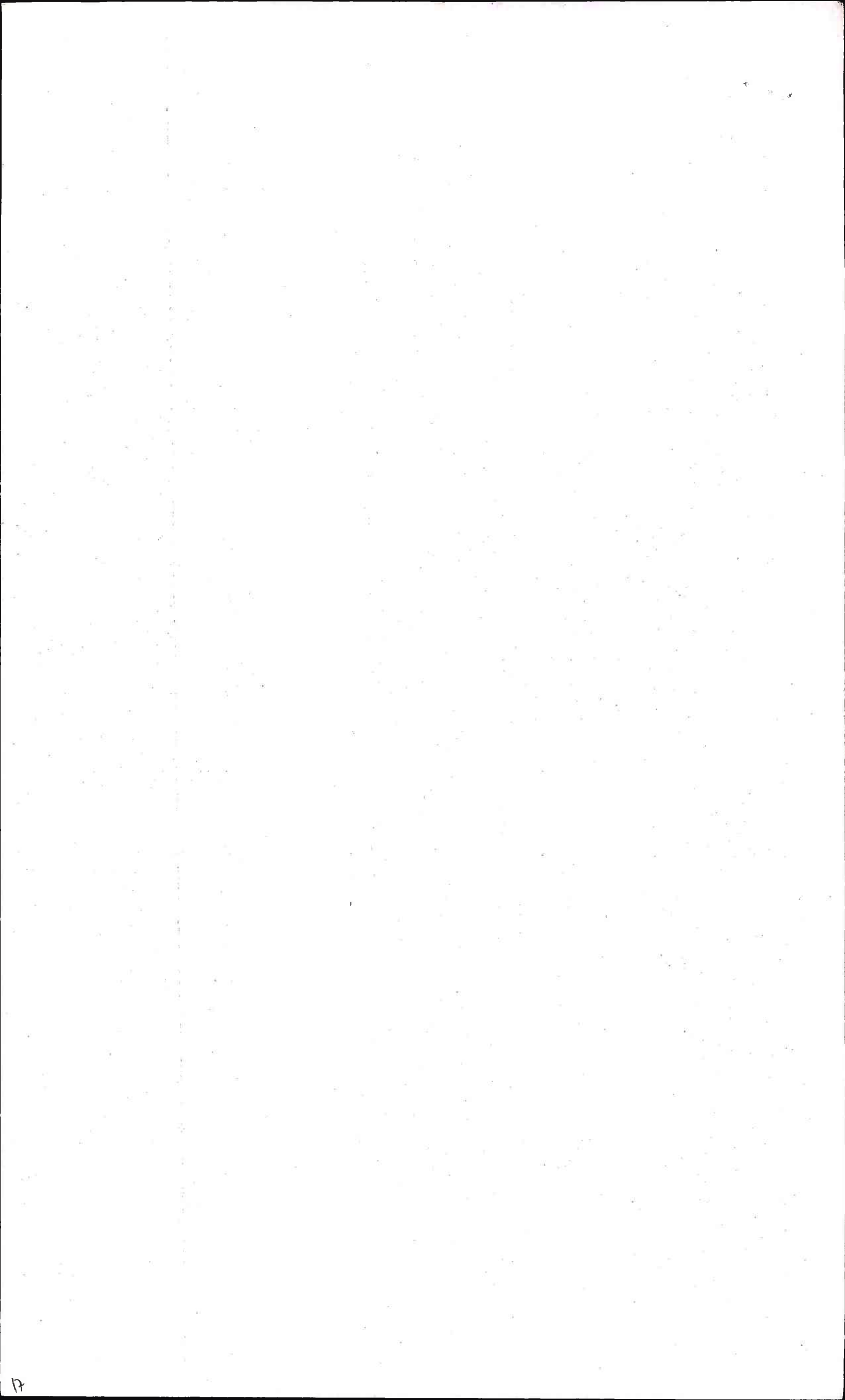
126. During the night of 11/12 June HMS *Glamorgan* was withdrawing from a bombardment of shore positions around Port Stanley when she was hit by a shore-launched Exocet missile. Her company extinguished severe fires and the ship continued to be available for action. 13 men died. It was the last direct attack on a British ship in the Campaign.

127. The second phase took place on the night of 13/14 June. In the north, in another superbly executed night attack, 2 PARA captured Wireless Ridge. Further south the Scots Guards had a hard fight to capture Tumbledown Mountain from a regular Argentine Marine battalion whose heavily defended machine gun emplacements put up fierce resistance for a number of hours. The Scots Guards secured their objectives and the Gurkhas moved through to take Mount William to the south-east. In this final phase we lost 20 men.

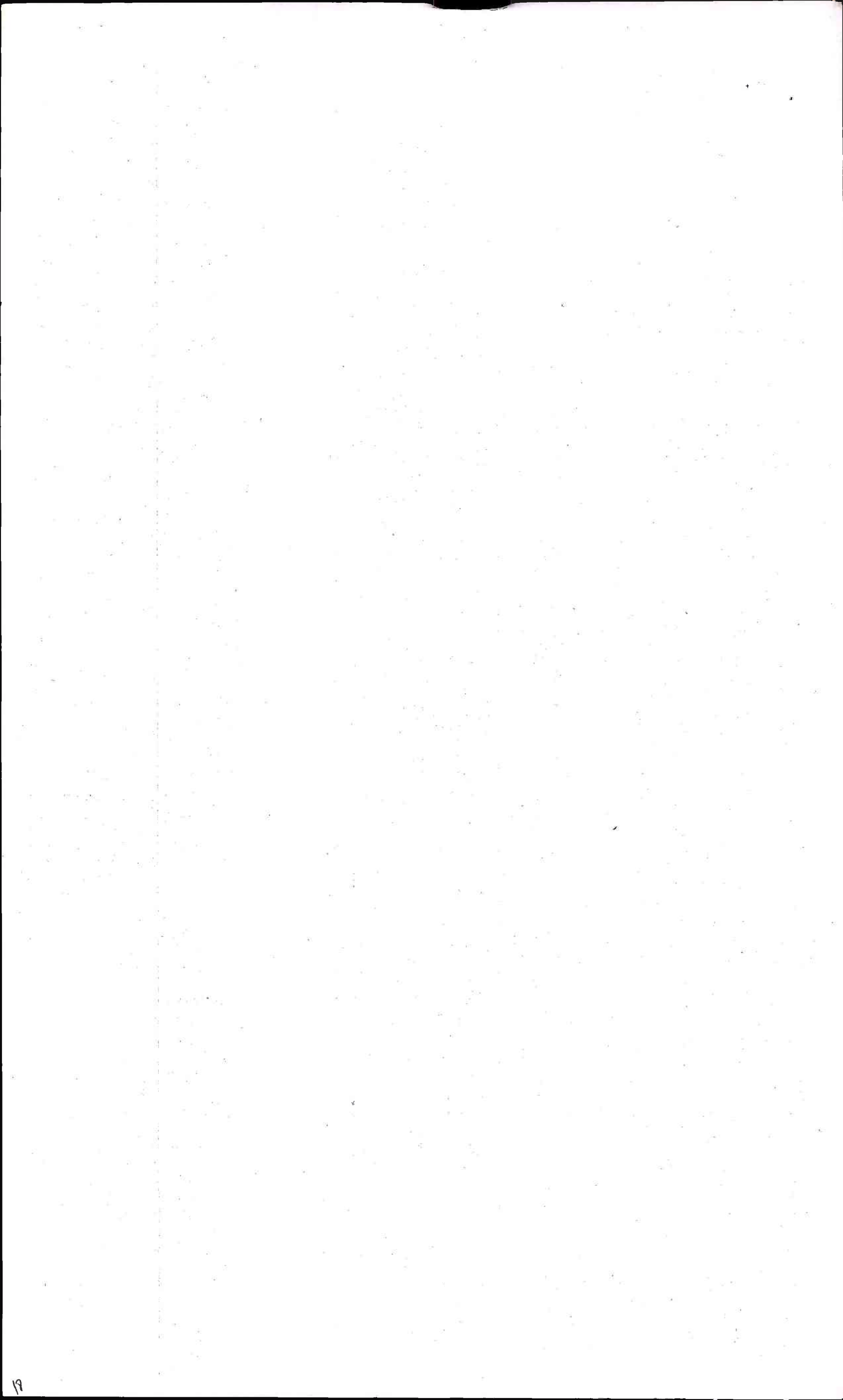
128. Large numbers of the enemy abandoned their positions, discarded their weapons and stood around disconsolately. British troops followed up to the edge of Port Stanley where they were ordered to halt and fire only in self defence, to avoid fighting in the town and among the civilian population. Soon afterwards white flags were reported over Stanley and General Moore accepted the Argentine surrender.

Chronology

- 2 April Argentina invades the Falkland Islands.
- 3 April Argentina invades South Georgia; UN passes Security Council Resolution 502; first RAF transport aircraft deploy to Ascension Island.
- 5 April First task force ships sail from the United Kingdom.
- 12 April 200 mile maritime exclusion zone comes into effect.
- 23 April The Government warns Argentina that any approach by Argentine warships or military aircraft which could amount to a threat to the task force would be dealt with appropriately.
- 25 April British Forces recapture South Georgia; submarine *Santa Fé* attacked and disabled.
- 30 April Total exclusion zone comes into effect.
- 1 May First attack on Falklands by Vulcan, Sea Harriers and warships; first Argentine aircraft shot down.
- 2 May General Belgrano sunk by HMS *Conqueror*.
- 4 May HMS *Sheffield* hit by Exocet missile; later sinks.
- 7 May The Government warns Argentina that any Argentine warships and military aircraft over 12 miles from the Argentine coast would be regarded as hostile and liable to be dealt with accordingly.
- 9 May Two Sea Harriers sink trawler, *Norwai*, which had been shadowing task force.
- 11 May HMS *Alacrity* sinks store ship *Cabo de los Estados* in Falkland Sound.
- 14/15 May Special Forces night raid on Pebble Island; 11 Argentine aircraft destroyed on the ground.
- 21 May 3 Cdo Bde establish beach-head at San Carlos; HMS *Ardent* lost; some 15 Argentine aircraft destroyed.



23 May	HMS Antelope crippled (sinks on 24 May); 10 Argentine aircraft destroyed.
24 May	18 Argentine aircraft destroyed; some damage to ships.
25 May	HMS Coventry lost and Atlantic Conveyor hit by Exocet; (sinks 28 May); 8 Argentine aircraft destroyed.
28 May	2 PARA recapture Darwin and Goose Green.
30 May	45 Cdo secure Douglas settlement; 3 PARA recapture Teal Inlet; 42 Cdo advance on Mount Kent and Mount Challenger.
1 June	5 Bde land at San Carlos.
8 June	RFAs Sir Galahad and Sir Tristram hit at Fitzroy; 10 Argentine aircraft destroyed.
11/12 June	Mount Harriet, Two Sisters and Mount Longdon secured; HMS Glamorgan hit by shore-based Exocet— damaged but seaworthy.
13/14 June	Tumbledown Mountain, Wireless Ridge and Mount William secured; General Menendez surrenders.
20 June	South Thule secured.
25 June	Mr. Hunt, Civil Commissioner, returns to Port Stanley.



Part 2

The Lessons

Introduction

201. The Falklands Campaign was in many respects unique. We must be cautious, therefore, in deciding which lessons of the Campaign are relevant to the United Kingdom's main defence priority—our rôle within NATO against the threat from the Soviet Union and her allies. The basic ingredients for success were present from the outset: a firm resolve; flexibility of force; equipments and tactics; human ingenuity; and well trained officers and men.

202. From the outset the Government were heartened by the understanding and support of the United Kingdom's partners in the European Community, our Allies in NATO and, not least, our friends in the Commonwealth. The international support, which in many cases represented a clear choice of principle over material interest by the Governments concerned, was of value in bringing home to the Argentine leaders the extent of their international isolation. It also extended in some instances to the provision of material which was of direct benefit to the task force.

203. The Campaign provided the Royal Navy's first experience of battle in the missile age. At San Carlos British forces undertook the first large-scale amphibious operation for many years. And in the land battles for Port Stanley they experienced an infantry battle at brigade strength and in extreme weather conditions. Our analysis of the Campaign is continuing; some new lessons have been learned; many more old lessons have been reinforced. The following sections describe the principal lessons and the steps we are taking to apply them.

Crisis Management and Command and Control

204. The higher management of the crisis was conducted by a small group of Ministers which was chaired by the Prime Minister and met almost daily. The Attorney General attended meetings when legal advice was required. The group in attendance always included the Chief of the Defence Staff, as the Government's principal military adviser. This group of Ministers ensured that the diplomatic, economic and military strands of our policy were properly coordinated. On the military side it established clear guidelines within which commanders were to conduct the operations, without making any attempt to direct the battle from 8,000 miles away. This short and clear chain of command made possible quick reaction to events and to the needs of the forces in the South Atlantic.

205. Effective political control and higher command of the operation required good communications between the United Kingdom and the task force. The vital importance was shown of satellite communications in operations conducted at great distance. There were times during the Falklands Campaign when

flow of signal traffic to the task force threatened to exceed the capacity of available systems. This never delayed the transmission of important operational messages but it did affect some other traffic. We currently plan to acquire a new British military satellite and to provide a terminal in all major surface warships, which will be a significant improvement. As the task force sailed south it became increasingly important to receive frequent detailed situation reports from the area of operations, both as general background for decision makers in Whitehall and as the essential basis for early and accurate announcements to Parliament and the media on events in the South Atlantic. Hard pressed local commanders were not always able to provide these and for the future we are considering how they might be enabled to do so. It will not, of course, be the intention to impose any detailed direction of action in the field, which must remain the responsibility of the commander on the spot.

206. We have studied the management of the crisis carefully. In particular we have looked at the effectiveness of inter-Departmental coordination and the liaison between the Ministry of Defence and operational headquarters, which in this case was the headquarters of the Commander-in-Chief Fleet. In every important respect the Government and military machines worked extremely well during the crisis.

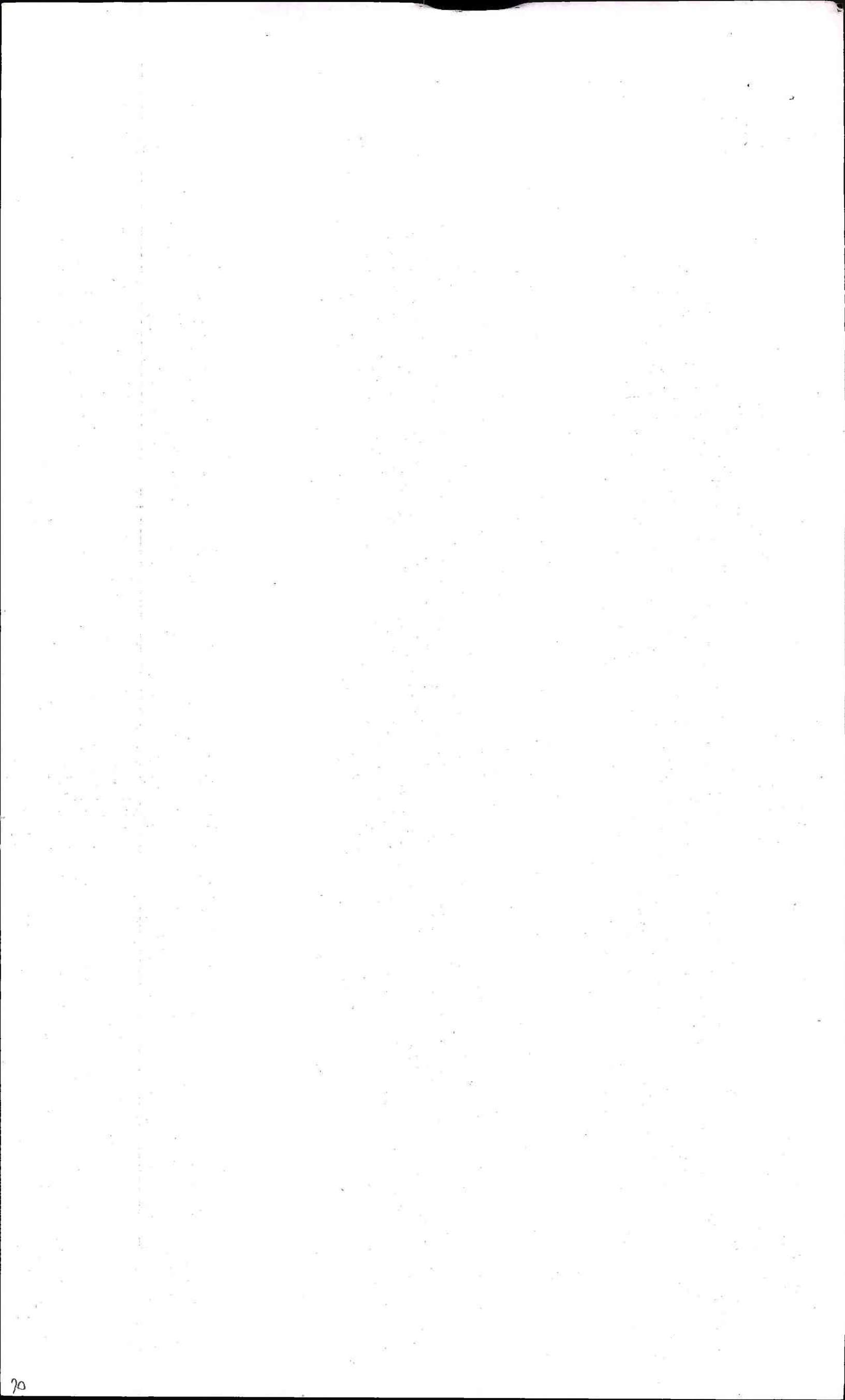
Men

207. The most important factor in the success of the task force was the skill, stamina and resolution displayed by individual Servicemen. The value of professional, volunteer, highly trained and carefully selected Armed Forces was amply demonstrated. The specialised training of a substantial proportion of the landing force—such as the Commandos—was a particularly significant asset. The quality of British Servicemen was exemplified by the defence of the landing at San Carlos; by the determined assault on heavily defended enemy positions at Goose Green; by the remarkable series of night attacks before the fall of Port Stanley; and by the outstanding performance of the Harrier and helicopter pilots.

208. The manner in which the task force responded to the many challenges and difficulties it encountered totally vindicated the priority we attach to training at all levels, from the teaching of individual skills to large-scale exercises. The Campaign highlighted the importance of both physical and mental toughness. To achieve and maintain this we need to keep readiness and training at as high a level as possible.

Maritime Operations

209. The operations of the task force at sea were guided by three established principles of maritime warfare: containment of enemy forces, defence in depth and keeping the initiative. The course of the Campaign emphasised the relevance of these principles and the importance of a balanced fleet, the RFA's ability to replenish RN ships at sea and the support of ships from the Merchant Navy. The key questions of warship performance and maritime air defence are discussed in paragraphs 218-221 and 225-230.



Amphibious Warfare

210. The experience gained by the Royal Navy and Royal Marines from their extensive training in amphibious operations proved vital. The landings at San Carlos clearly demonstrated the ability of HMS *Fearless* and HMS *Intrepid* to launch and support amphibious operations and the value of suitably adapted merchant ships to supplement the logistic landing ships. 3 Cdo Bde, reinforced by 2 PARA, 3 PARA and other elements proved ideally suited for the task. The helicopters deployed with the landing force played an invaluable part. The weather, terrain and the likely requirement to land away from established ports were similar to the conditions British forces would face in Norway, on NATO's northern flank. The success of the Falklands Campaign bore out our confidence, and that of our Allies, in the ability of British amphibious forces to react swiftly and effectively to emergencies in and away from the NATO area.

Nuclear-powered submarines

211. Our nuclear-powered submarines (SSN) played a crucial rôle. After the sinking of the *General Belgrano* the Argentine surface fleet effectively took no further part in the Campaign. The SSNs were flexible and powerful instruments throughout the crisis, posing a ubiquitous threat which the Argentines could neither measure nor oppose. Their speed and independence of support meant that they were the first assets to arrive in the South Atlantic enabling us to declare the maritime exclusion zone early. They also provided valuable intelligence to our forces in the total exclusion zone.

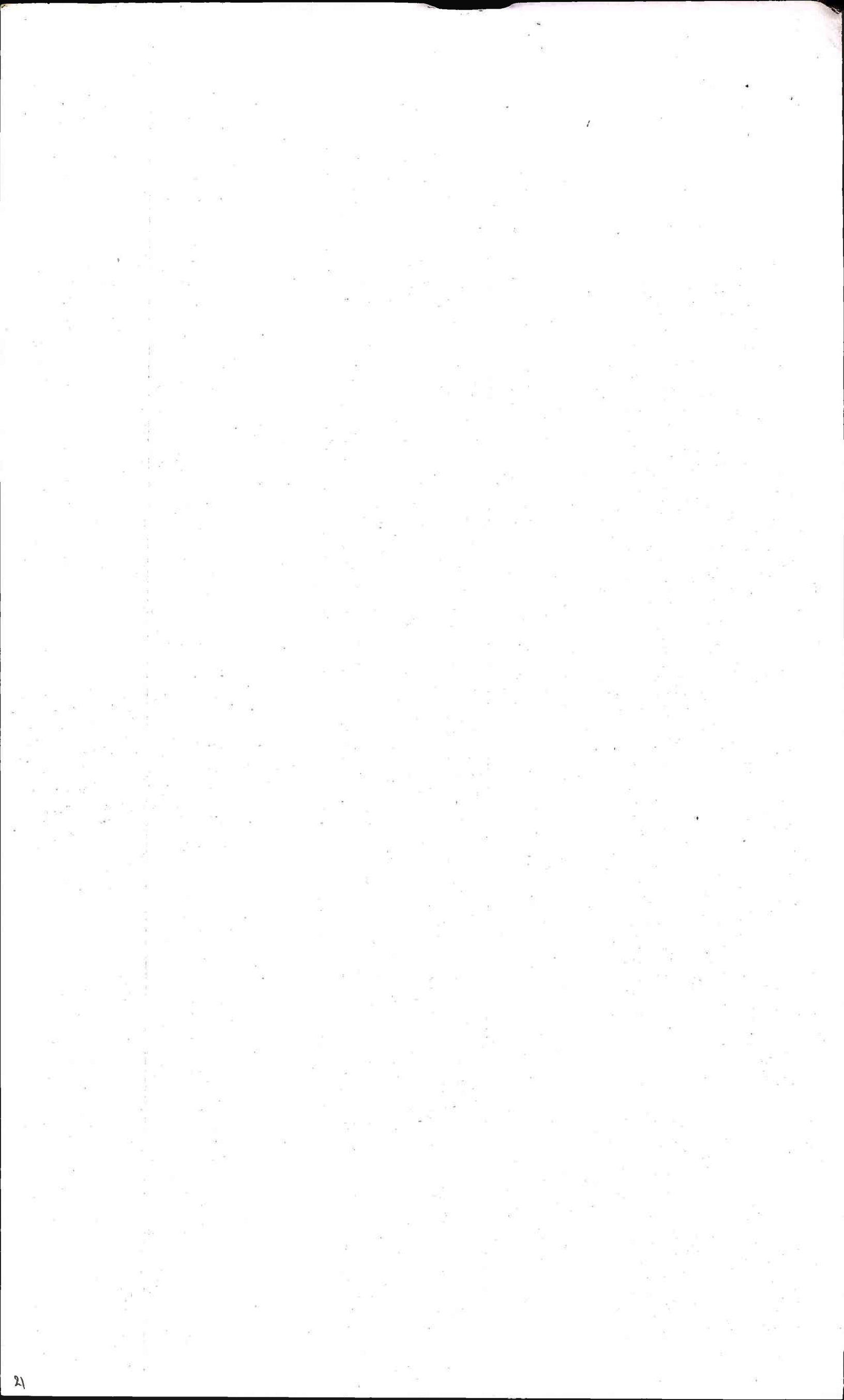
Land Operations

212. The most decisive factors in the land war were the high state of individual training and fitness of the land forces, together with the leadership and initiative displayed especially by junior officers and NCOs. The Campaign underlined the importance of night operations and aggressive patrolling, which were particularly decisive during the determined series of attacks around Port Stanley, where assaults were conducted against a prepared enemy with clear fields of fire. A number of lessons will be reflected in training priorities and equipment plans. The present types of weapons proved effective but the infantry need to be supported by greater direct and indirect firepower in attack. Milan and 66 mm anti-tank weapons proved highly successful against prepared enemy positions, but there is also a requirement for an area attack weapon such as a grenade launcher.

213. The infantry would not have been able to carry their objectives without the support they received from artillery and Naval bombardment. The ability of the 105 mm light guns to bring down instant and accurate fire at night or through smoke and fog contributed significantly to the final collapse of Argentine morale. The importance was underlined of all ranks being trained and able to call for fire.

Special Forces

214. The SAS and the SBS played a key rôle in the Campaign. They operated in advance of the main land forces to gather essential intelligence, and also



conducted widespread raids to confuse and disorganise the Argentine force. This tactic was notably successful in assisting the landing force to come ashore virtually unopposed at San Carlos. Later, they moved ahead of the landing force to reconnoitre the high ground around Mount Kent, from which the final assault was launched on the Argentine positions in front of Port Stanley.

215. In the most demanding circumstances the Special Forces were thoroughly tested in the skills and tactics which they would employ in any future war in the NATO area. Their response has justified our confidence that existing selection and training methods produce Special Forces which are well prepared for the calls that might be made on them in general war. The combination of a single patrol of intelligence-gathering skills and the capacity to mount highly destructive raids gives military commanders a flexible and potent weapon. Experience in the Falklands confirmed this, as well as providing useful lessons for the future, particularly about improvements in equipment.

Equipment

216. Weapons systems depend for their effectiveness not only on their inherent quality but also on the thorough and realistic training of their operators, on first class maintenance, spares and servicing. The Armed Forces are well organised and equipped primarily for operations in the NATO area against Warsaw Pact. In the South Atlantic they faced a different challenge. Particularly aircraft, but also other equipments, were constantly in demand to perform unfamiliar tasks which were important to the operation. The effects of a long sea passage and damp on land-based missiles, electronics and other equipment had to be overcome. On the other hand, some conditions were easier than they would be in NATO operations: for example, the virtual absence of electronic counter-measures (ECM) in the Argentine inventory.

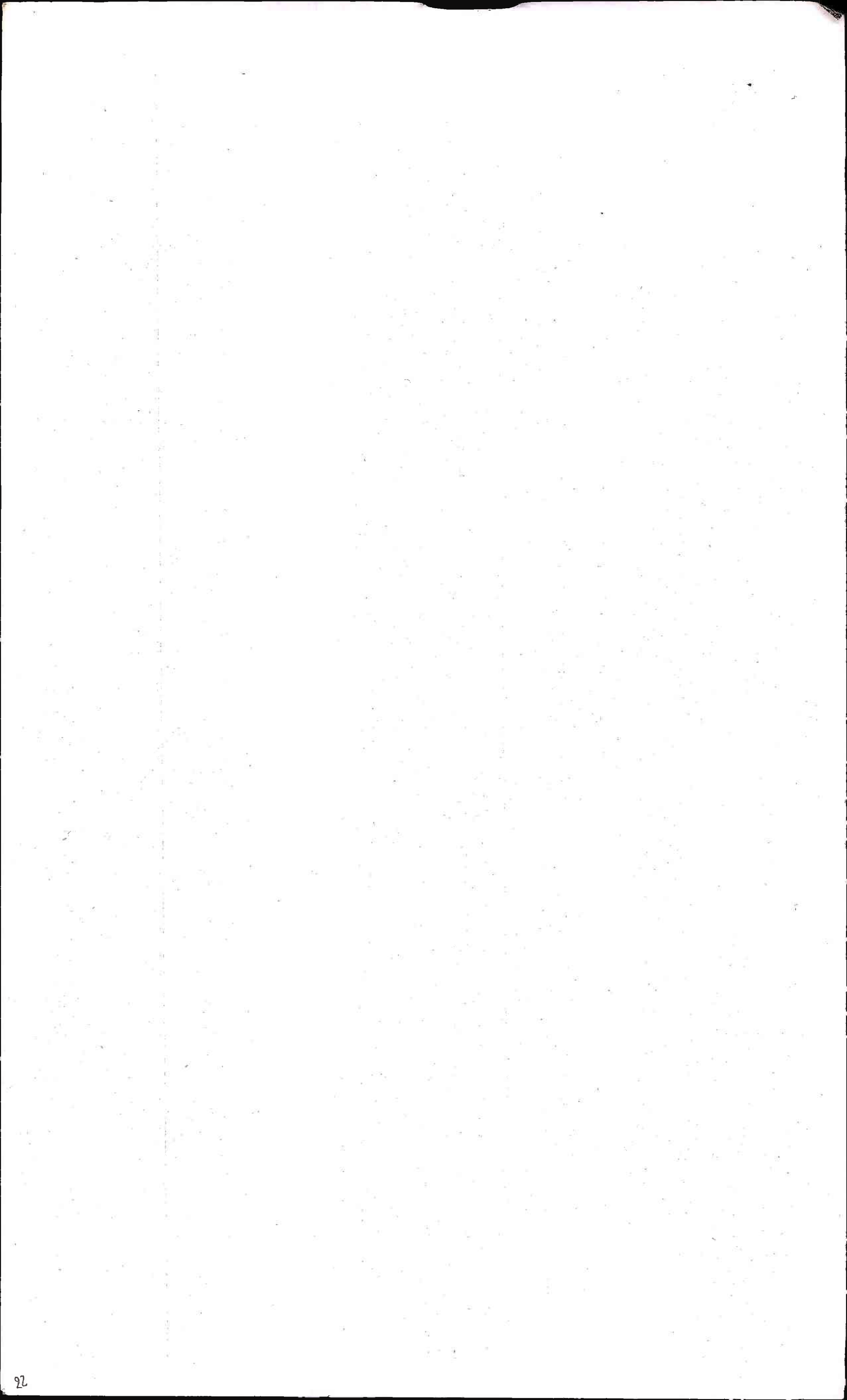
217. Nevertheless, the Campaign provided a unique opportunity to test our equipment in combat. Experts have assessed the performance of individual equipments and their support arrangements. Generally the equipment and weapons systems performed well in especially demanding circumstances: well as, and sometimes better than, expected. The operational availability of equipment was impressive. In most cases the need was confirmed by improvements already planned. We discuss in the remainder of this section the performance of the main weapons platforms and the contribution of equipment in the roles in which it was deployed.

Warships

218. Operations in support of an amphibious landing within range of enemy aircraft and without the assistance of airborne early warning (AEW) aircraft or land-based all-weather fighters inevitably risked ship losses. In addition to the four warships, one RFA and one merchant ship were lost; eight other warships and two RFAs suffered varying degrees of damage.¹ In most cases these ships continued to take part in operations, making good damage through the efforts of their crews aided by specialist teams. The carriers, HMS *Hermes*

Note:

¹ Details of ship and aircraft losses are given in Annex C.



and HMS *Invincible*, were effective and flexible command ships and provided good platforms for air operations. For example, on 1 May HMS *Hermes* tasked 12 Sea Harriers in attacks on Port Stanley and Goose Green, yet one hour after their return home the same aircraft were airborne for air defence patrols.

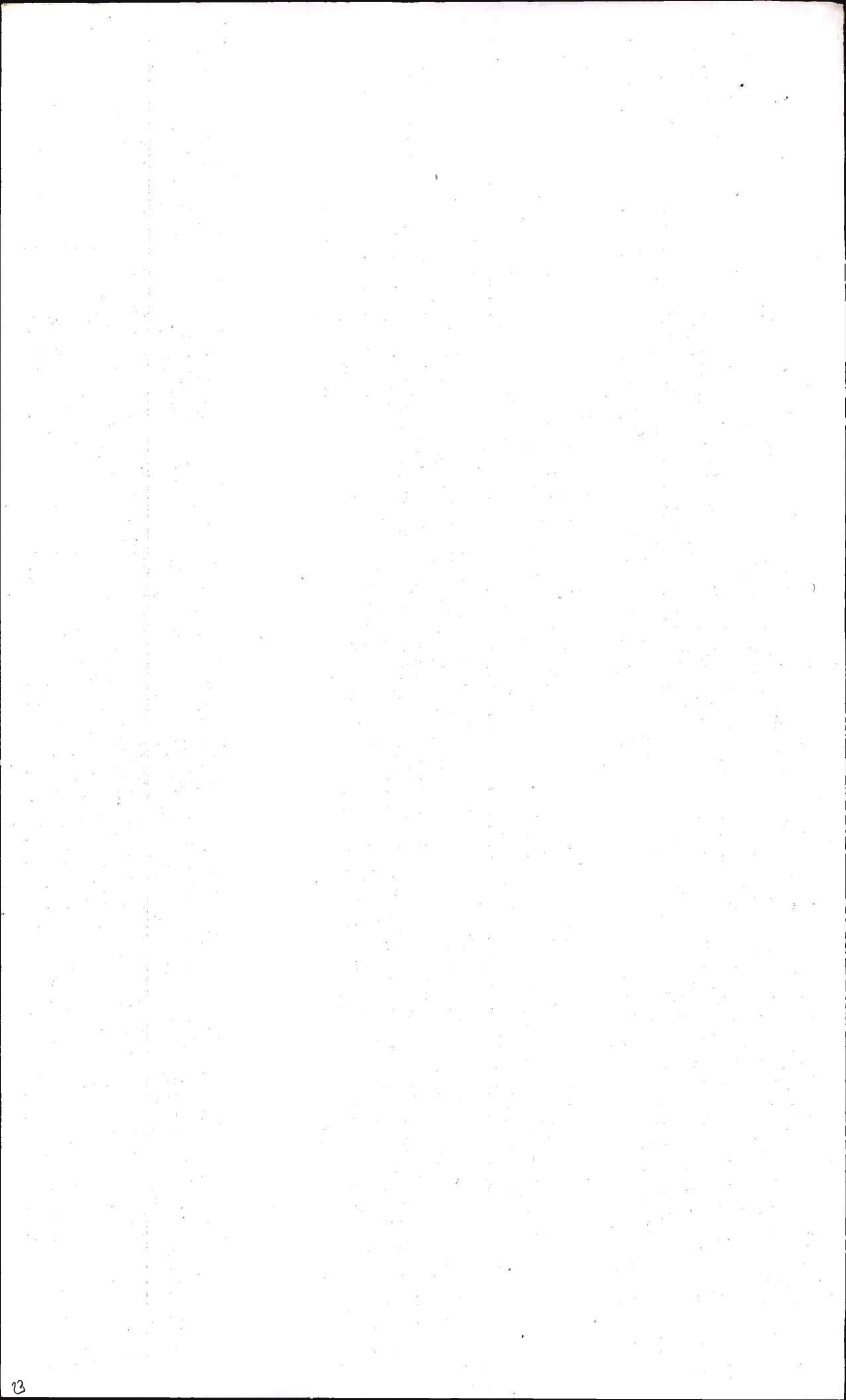
219. In our assessment of the lessons to be drawn for warship design we have had the benefit of a valuable independent review conducted by members of the Marine Technology Board of the Defence Scientific Advisory Council. It is clear that RN ships are strong and reliable platforms able to operate continuously at sea even in the most difficult weather conditions. No fundamental design defects have been identified.

220. There has been comment on the use of aluminium in the construction of ships. The facts are that aluminium was used in the superstructure of the Type 21 class of frigate and to a small extent in a few other classes, but not the Type 42 destroyers, such as HMS *Sheffield*. In addition, aluminium was sometimes used for non-structural minor bulkheads, ladders and ventilation trunking. By use of aluminium it is possible to make significant savings in the weight of ships above the water-line, but it has been recognised that if metal loses strength in fires and therefore its extensive use in the construction of RN warships was discontinued several years ago. Nonetheless, there is no evidence that it has contributed to the loss of any vessel.

221. Some important lessons have been learned about the rapid spread of fire and smoke in ships, and about the use of materials which can prove hazardous in fires. Cabling fitted in older ships can prove inflammable; this hazard will be greatly reduced in new ships. Urgent studies are now in hand aimed at improving the survivability of existing ships and incorporating lessons in future designs. Examples of measures which will be taken include improved fire zones; changes to the design of watertight doors and hatches; the provision of more escape hatches; making bulkheads more smoke-tight; the re-siting of fuel tanks; reductions in inflammable materials; and additional fire pump breathing apparatus and personal breathing sets.

Aircraft

222. *Harrier*. 28 Sea Harriers and 14 RAF Harrier GR3s were eventually deployed to the South Atlantic. Over 1,100 combat air patrol missions and 90 offensive support operations were flown by Sea Harriers and 125 ground attack and tactical reconnaissance sorties by Harrier GR3s. These aircraft were a major success, showing themselves to be flexible, robust, reliable and effective. Sea Harriers, which are intended largely for air defence, were also employed in the ground attack and reconnaissance rôles: the Harrier GR3, a primarily ground attack aircraft, were converted within a week to use Sidewinder AIM 9L air-to-air missiles in the air defence rôle. There was 90% availability at the beginning of each day and 99% of all planned missions were flown. Sea Harrier demonstrated itself to be more than a match for Argentine conventional fixed wing aircraft with 20 confirmed and 3 probable kills, of which 16 and 1 respectively are attributable to Sidewinder AIM 9L missiles. Six Sea Harriers were destroyed, of which two were lost to enemy fire—one to small-arms fire and one to a Roland surface-to-air missile. Three GR3s were also lost to enemy fire, all to ground gunfire. Most aircraft engaged in offensive



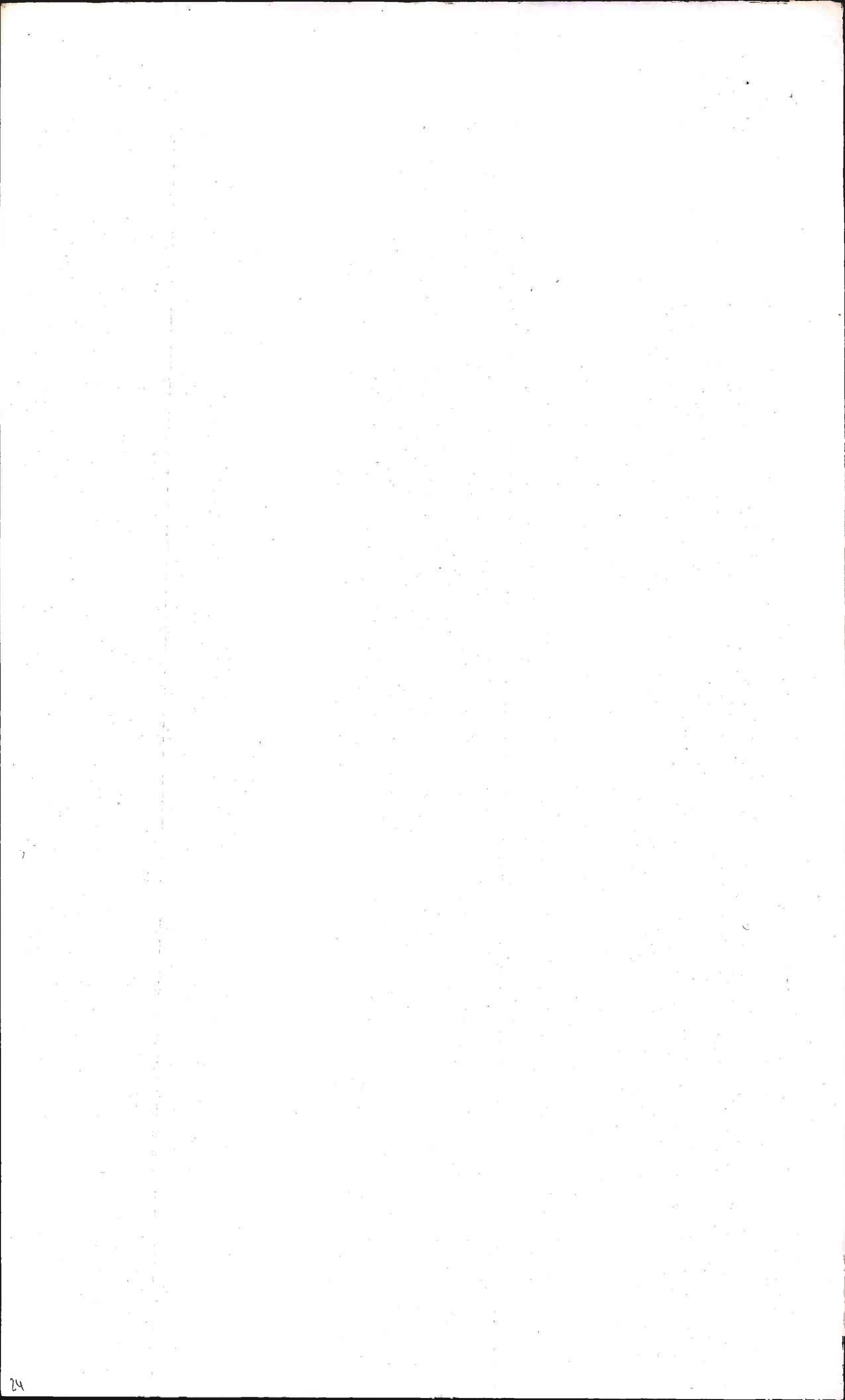
support survived damage, which usually resulted from intense Argentine aircraft gunfire. The need was demonstrated for certain improvements to Sea Harrier to provide greater endurance and weapon carrying capacity and a better radar. As a result, Sea Harriers, starting with those already deployed in HMS *Illustrious*, are being given greater endurance by the fit of larger oil tanks, and increased armament by the fit of four rather than two Sidewinder missiles. Improvements to the Sea Harrier's radar and radar warning receiver systems are planned.

223. *Nimrod*. The Nimrod maritime patrol aircraft was given a similar effective air-to-air refuelling capability and 16 aircraft have been modified in this way. This, with the addition of vision aids, improved navigation equipment, and a variety of weapons including Harpoon, Stingray and Sidewinder, has greatly enhanced its overall capability. A total of 34 Nimrods will eventually be modified to enable them to carry anti-shipping and air-to-air missiles. The Nimrods' Searchwater radar performed well, enabling crews to monitor shipping at long range, outside missile engagement zones of possible enemy warships. The full capability of this radar is still being developed and exploited.

224. *Helicopters*. Almost 200 helicopters of seven different types (Sea King, Wessex, Lynx, Gazelle, Wasp, Scout and Chinook) were deployed. After the loss of three Chinooks and six Wessex in the *Atlantic Conveyor*, there was a shortage of helicopters to support the ground forces even though a squadron of Sea King anti-submarine warfare (ASW) helicopters had been converted to the support rôle. A graphic illustration of the Chinook's capability was supplied by the single aircraft to survive the sinking of the *Atlantic Conveyor*; without spares and ground support it flew 109 hours in combat conditions, carrying up to 80 armed troops in a single lift. In addition, helicopters were also heavily committed in the ASW or anti-surface vessel warfare (ASVW) rôle, logistics, search and rescue, casualty evacuation and reconnaissance or support rôles. Naval helicopters operated at over three times peacetime rates. Lynx performed well and the Sea King Mk 4 with its large internal and external load-carrying capability was particularly useful. Of the Army helicopters, Gazelle is designed to be used predominantly as a reconnaissance and command-and-communications helicopter. Without offensive armament and in a country devoid of natural cover it proved vulnerable to ground fire and we are currently assessing ways of enhancing its battlefield survivability.

Air Defence

225. The battle for air superiority was vital to the success of the Campaign. In NATO operations in the Eastern Atlantic the Royal Navy would be supported by land-based aircraft and, when available, the carrier strength of the United States Navy. In the South Atlantic, the task force was faced with an efficient land-based air force of over 200 frontline aircraft, and its greatest handicaps were the shortage of fighter aircraft and the lack of AEW. Sea Harriers were outnumbered six to one. AEW aircraft could not be deployed at all. The task force relied on a mix of systems for air defence. These comprised electronic detection systems, fighter aircraft, ECM, medium and short-range missiles



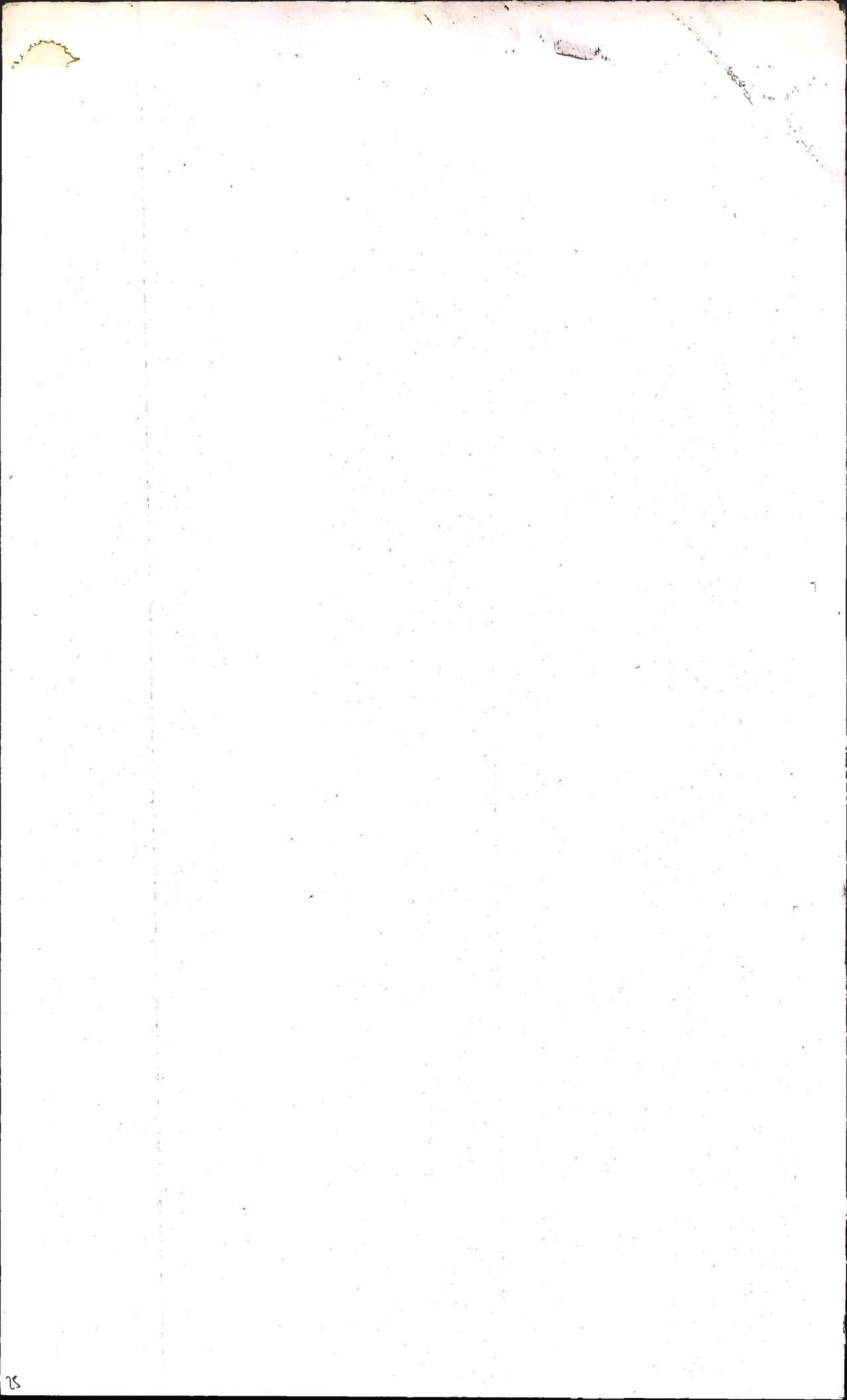
medium-calibre guns and, finally, close-range point defence systems such as rapid-firing guns and hand-held missile launchers. These systems between them destroyed a confirmed total of 72 enemy aircraft and a further 14 probably. By the time of the final assault on Port Stanley the Argentine air force had been effectively neutralised as a fighting force. Our assessments of Argentine losses and of the performance of individual missile systems are shown in Annex B.

226. The value of the medium-range air defence missile, Sea Dart, was evident in the eight kills it achieved. The known capability of the system also deterred many attacks and forced the Argentine aircraft to fly at low altitude, which made them easier targets for other systems and often prevented their bombs from fuzing. There are areas in which the Sea Dart can be improved and these are either in hand or being studied.

227. Although designed primarily as a self-defence weapon against missiles, the capable Sea Wolf point defence system was used against low-level attacking aircraft. In this rôle it shot down five Argentine aircraft. No opportunity arose to use Sea Wolf against missiles. The flexibility of this system was shown by the speed with which its software was adapted to cope with low-level aircraft attacks. A package of improvements for Sea Wolf is already in hand.

228. As acknowledged above, the absence of AEW was a severe handicap against Argentine air attacks mounted at very low level, especially at San Carlos where the radars deployed suffered considerable interference from the surrounding high land. The lack of AEW also proved an important limitation in the task force's ability to deal with the threat from Exocet by intercepting the aircraft carrying it before the missile could be launched. The difficulty of guaranteeing detection of low-flying aircraft made it prudent for the carrier to operate well to the east of the Falklands, which limited the patrol time of Sea Harriers. This shortcoming has now been remedied in part by the deployment in HMS *Illustrious* of two Sea King helicopters equipped with modified Searchwater radars, which taken with the deployment of Sea Harriers with greater endurance represents a major improvement in our carrier-borne air defence capability. Further steps to improve the AEW capability of the Fleet are discussed in Part 3. In addition the Nimrod AEW Mk 3 will be deployed in the Eastern Atlantic from 1984, following initial delivery towards the end of 1983. In the Falklands we now have new radars and RAF Phantom which, when on combat air patrol, can provide some early warning of low-level air attack.

229. The threat posed by the sea-skimming missile, Exocet, was well understood before the operation; and counter-measures to deal with it were available to the task force. Additional electronic and other measures were very quickly devised and deployed to the South Atlantic. For example, chaff was extensively and successfully used. For the future the improved Sea Wolf system already ordered will have an all-weather capability against low-level missiles, and several programmes are in hand to improve our ship-borne ECM capability. The provision of AEW will also enhance the ability of RN warships to deal with this threat.



230. Other areas for improvement which have been identified in the ship-borne air defence field include:—

- a. The need for a point defence weapon system for high value units. As an interim measure the American Vulcan-Phalanx gun system has been mounted on HMS *Illustrious* and HMS *Invincible* and low-level air defence guns have been fitted to a number of other ships. Our plans for the future are described in paragraph 311f.
- b. The need for more realistic training. In particular all ships need to be fitted with a wide range of on-board trainers if the Royal Navy is to optimise the performance of its high technology systems. There is also the need for more realistic targets for the peacetime training of air defence weapon system operators.
- c. Ship-borne surveillance radars and command and weapon control systems. Various improvements are being urgently examined.

231. As to land-based air defence, Rapier performed well and had a major impact on the Campaign. It was employed only in the optical mode to provide land-based low-level air defence after the landings on 21 May. The conditions for the operation of Rapier were severe. The system had been exposed to the rigours of a long sea voyage and was without its second-line support. Enemy air attacks were generally prosecuted at below 100 feet, often in valleys shrouded by mist and in poor light. Nevertheless, it scored 14 confirmed and 6 probable kills. A series of improvements to the system's reliability and speed of reaction has already been developed and is being incorporated in Rapiers in the United Kingdom and Germany. We have also planned for some time to introduce later in the decade a further series of improvements to the missile, fuze, the radars and the capability of the system against multiple targets.

232. Blowpipe is a point defence missile system designed to be operated, and carried limited distances, by one man. In this campaign it was used extensively against fast-crossing targets for which it was not designed, and subjected to far rougher handling than it had been designed to withstand. Despite this it brought down nine enemy aircraft and a further two probables. Experience in the Campaign has confirmed the need for the series of improvements already in hand, which include enhancements to the missile warhead and motor and the introduction of an improved aiming unit and an alerting device. These improvements should be completed in stages over the next six years.

Anti-Surface Vessel Warfare

233. The strategic dominance of the SSN and its crucial part in the Campaign have already been described in paragraph 211. Apart from the sinking of the cruiser, *General Belgrano*, surface action was confined to engagements against patrol craft and small merchant vessels. The helicopter mounted air-to-surface guided weapon, Sea Skua, was deployed for the first time and performed excellently. It scored eight hits with eight firings, destroyed one patrol craft and seriously damaged two other Argentine ships. The 4.5" gun also proved to be accurate and effective in the anti-surface ship rôle.

Anti-Submarine Warfare

234. In the face of the threat from Argentine submarines, task force ships and aircraft carried out extensive anti-submarine operations. The ability to sustain

such operations was proved. The operations highlighted the difficulties of conducting ASW in shallow water. We have already planned a number of improvements in our ASW capability and will be examining what other measures are now required.

Land Warfare

235. In general the land forces found most of their equipment well able to withstand the rugged treatment it received on the Falklands. Of special interest were:—

- a. *Mobility.* The ground forces were heavily dependent on helicopters and tracked vehicles for mobility. The tracked combat reconnaissance vehicles, Scorpion and Scimitar, performed very well in boggy conditions, covering an average of 350 miles each. One vehicle withstood a shell which landed 1½ metres away; another ran over a mine which severely damaged the vehicle but left the crew unharmed. The Combat Engineer Tractor was also an essential and effective vehicle on this demanding terrain. The extensive use of mines by the Argentine army was a notable problem. An assessment of the Army's ability to breach minefields rapidly had been set in hand before the Campaign.
- b. *Artillery and Naval Gunfire Support.* The main land-based artillery support for the ground forces was provided by the 105mm light gun which together with its ammunition was deployed mainly by helicopter. Its performance was excellent. The five batteries engaged fired nearly 17,500 rounds. Some guns fired as many as 500 rounds in 24 hours. Task force ships fired 8,000 rounds of ammunition in accurate Naval gunfire support attacks on ground targets.
- c. *Anti-Armour and Personal Weapons.* The self-loading rifles and general purpose machine guns proved effective small arms, notwithstanding that the weight of weapons and ammunition presented physical and logistic problems on such unfavourable terrain. These problems will be eased considerably by the new small arms which should enter service in the mid-1980s. The 81mm mortar proved versatile and effective. Although not used in their primary rôle, anti-armour weapons such as Milan were very effective against strong defensive positions.
- d. *Night Fighting.* A requirement was demonstrated for more night fighting equipment. Since the conflict we have placed orders for the procurement of general purpose night-vision goggles for the infantry and night-flying goggles for the Army Air Corps. Further purchases of both types are planned.
- e. *Combat Clothing.* In the exceptionally demanding conditions of the Falkland Islands winter a number of shortcomings were identified in clothing and personal equipment. Replacement of some of these items has already commenced.

Air-to-Ground Warfare

236. Although there was only limited opportunity to observe the effectiveness of our own land-based air power in combat conditions, several lessons emerged—both from our own operations and those of the Argentines—which are

important for future procurement policy. The most significant among them are:—

- a. *Attack on Airfields.* In the longest range bombing missions, four Vulcan bombers attacked Port Stanley airfield, but with 1000 lb bombs they were unable to close the runway for more than a short period. The need was underlined for an advanced air attack weapon such as JP 233.
- b. *Defence Suppression.* Although combat aircraft were quickly equipped with chaff and flare dispensers and some active ECM equipment, which proved vital in the event, the lack of defence suppression weapons to attack enemy radars exposed the Harriers to heavy and accurate ground fire. Vulcan attacks were made on radars close to Port Stanley with Shrike anti-radiation missiles, with some success; the procurement of anti-radiation missiles is included in our forward plans.
- c. *Close Air Support.* The Campaign exposed the limitations of the traditional method of forward air control of close air support operations. In the later stages laser target marking from the ground was used, enabling laser-guided bombs to make direct hits on their targets. In the future, tactical ground-air communications will be improved, and the effectiveness of laser target marking will be further explored.
- d. *Air Reconnaissance.* The absence of a dedicated overland air reconnaissance capability was a handicap in the Campaign, and the resulting lack of precise information on enemy dispositions presented an additional hazard to ground forces. We plan to improve our tactical reconnaissance capability.
- e. *Sea-Skimming Missiles.* The Campaign showed the potential of the launched, sea-skimming missile. We have already equipped a number of Nimrod aircraft with the Harpoon anti-ship missile and we will further improve our existing capability in this area by the acquisition of the advanced Sea Eagle missile, which has a longer range and more discriminating capability than Exocet.

Procurement and Improvisation

237. In the exceptional circumstances of the Campaign our procurement processes proved adaptable to meet the wide variety of military needs against very tight timescales. New operational demands were satisfied in record times through the ready availability of a broad spectrum of scientific and engineering expertise in the Ministry of Defence research establishments, the comprehensive resources of the United Kingdom's defence industry, and the benefits of an in-house research capability.

238. Those concerned at all levels in both Government and Industry worked hard to enhance our operational capabilities by specific threat assessment, computer modelling work; material and software modifications to equipment; rapid development of new equipment capabilities; and accelerated introduction of equipments into service. Examples included the development of important, often vital, equipments by combining existing items in new ways, such as

creation of AEW equipment using Nimrod Searchwater radars in Sea King helicopters (in only 11 weeks); the invention, production, proving and delivery in record time of many new equipments, including man-portable radar jammers (10 days from order to delivery); the accelerated introduction into service HMS *Illustrious*, HMS *Brzen* and weapons such as the Sea Stua anti-air missile; and the adaptation of Vulcan, Hercules and Nimrod aircraft for a to-air refuelling.

239. The urgency of the requirement frequently warranted the acceptance of lower engineering and safety standards; emergency arrangements worked well for the limited period of the operation. Overriding priority was given to the operation at all times and decisions were determined by what could be achieved in the time available.

240. The experience of the Campaign is being put to full use in the continuing quest for greater efficiency in the procurement process. It would be unrealistic to expect sweeping changes since the bulk of the emergency practices used were special to the operation and because equipment requirements were narrow to the immediate task of countering specifically known Argentine capabilities. Budgetary and cash limit restraints were removed although the principles of accountability and cost-effectiveness continued to apply.

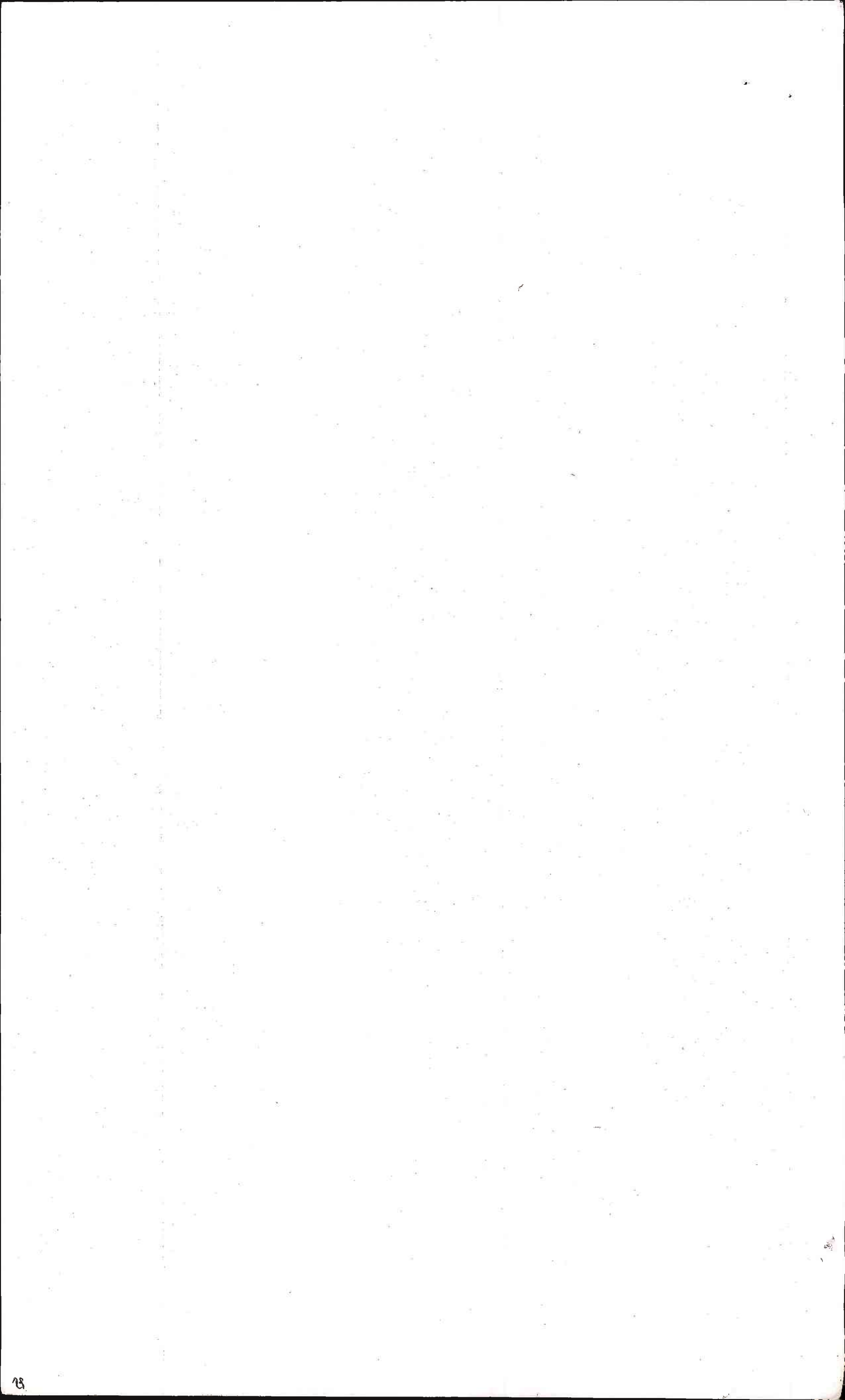
Logistics and Personnel

241. A military operation of this scale required the specialised skills of many thousands of managers, engineers and technicians. They performed a multitude of rôles, particularly in the logistics field, which were essential to the success of the operation but which did not require detailed direction. As was to be expected they responded well to the need for speed of action in following well established procedures and for improvisation whenever this was likely to assist the operational commander.

242. The logistic support of the Falklands Campaign was a major success. Despite lines of communication which stretched half way round the world, the task force rarely lacked essential supplies, and equipment and spares were maintained at high levels of availability. The task force was equipped and despatched in a remarkably short time, reflecting the high state of readiness and training of all three Services. Four lessons stand out.

243. First rates of usage, particularly of ammunition, missiles, and anti-submarine weapons were higher than anticipated. Last year we announced plans to increase substantially war reserve stocks in order to improve staying power; scalings will be reviewed in the light of experience in the Falklands Campaign.

244. Second we need to consider the level of logistic support maintained for 'out of area' operations. Since the late 1960s there has been a steady reduction in the Services' capability to support large forces outside the NATO area. The demands of the task force were met, but only by giving it first call on resources and by using some stocks earmarked for NATO operations. The Services' logistic capability to support 'out of area' operations has to



considered in the light of the Government's overall policy for such operations and this is discussed in Part 3. We shall, however, review the size and composition of the special stockpile being created to support 'out of the box' land operations. We shall also consider whether logistic support could be organised as part of a flexible system able to support forces whether in or outside the NATO area.

245. Third, *air-to-air refuelling* is vital in supporting operations at long range. For example, RAF Harriers flew non-stop to the South Atlantic from Ascension Island with tanker support. In the operations from Ascension Island, the relatively small amount of fuel carried by the Victor tanker aircraft resulted in a large proportion of the available tanker force being used on each Vulcan, Nimrod and Hercules sortie. Large capacity strategic tanking aircraft are needed to provide greater operational flexibility in the future. Our proposal for this is discussed in paragraph 311c.

246. Finally the Campaign brought home the significant contribution which *civil resources can make to the nation's strength in a crisis*. This was discussed in the Statement on the Defence Estimates for 1982 (Cmd 8529). Our intention to review the use of national logistic and manpower resources in this area has now been given even greater impetus. The smooth and rapid implementation of existing contingency plans to use merchant shipping in support of the Armed Services was a major success story of the Campaign. Some 45 ships were taken up from trade, from passenger liners to trawlers. They provided support across the entire logistic spectrum. Tankers carried fuel for ships, aircraft and land forces. Liners, such as the *QE2* and *Camberra*, and ferries gave service as troop carriers. Cargo ships, such as the *Atlantic Conveyor*, carried helicopters, Harriers, heavy equipment and stores. Other vessels were taken up as hospital ships, repair ships or tugs. All these ships were manned by volunteer, civilian crews, supplemented by small Naval or RFA parties.

247. Amongst the more notable conversions made to merchantmen were:
- a. The fitting of flight decks, which were designed and constructed in a matter of days and subsequently stood up to extremes of weather. Whilst no substitute for operational flight decks, these temporary facilities were invaluable.
 - b. The provision and fitting of equipment to all merchant ships to enable them to replenish at sea.
 - c. The equipping of trawlers as minesweepers, which swept some of the enemy buoyant mines.
 - d. The provision of additional communication, navigation and cryptographic equipment.
 - e. The provision of shipboard water production plants.

248. Civil air carriers supplemented the efforts of the RAF Air Transport Force and between April and June transported more than 350 tons of freight, including helicopters, to Ascension Island.

249. The Dockyards, civilian ports, stores depots, marine services and stores in Government Departments, together with hundreds of industrial firms later

and small, played a major part in despatching and sustaining the task force. All gave unstinted assistance, working long hours, including weekends and Bank holidays. British Rail and the road haulage firms reacted rapidly to move vast quantities of stores and equipment to the docks.

250. As a consequence of the Campaign we have decided that militarily useful features should be incorporated in the replacement for *Atlantic Conveyor* involving principally a prefabricated helicopter flight deck. We also have the option to take up the ship for a period each year for exercises. For the long term a working party of the Shipping Defence Advisory Committee will examine ways in which merchant ships likely to be required in any future emergency might be designed, modified or equipped for possible use in support of the Armed Forces or for self-defence.

251. The manpower demands of the campaign were met almost entirely by regular forces, and there was no general recall of reservists. It was, however, necessary to effect a selective call-out of a small number of Naval reservists and to retain some Naval personnel who might otherwise have been due for leave. The call-out worked smoothly but the exercise indicated the need to examine the legislation on the recall of reservists. As we pointed out in Cmnd 8529 the various categories of Reserves would play an essential part in any future war in the NATO area. Some enhancements to our capabilities have already been made, for example by the expansion of the Territorial Army, and other steps are being studied.

252. The outstanding feature of the *medical and casualty evacuation system* was the dedication of the doctors and medical staff both in the field and on board ship. Casualties were in surgery within six hours or less and, as a result of this and the skill of our medical teams, over 90% survived. Extensive use was made of helicopters and hospital ships. VC10s were used in an aero-medical role to return casualties speedily to the United Kingdom. There were some difficulties in the initial planning of medical support for the operation. These are being studied with a view to making the most effective and economical use of medical resources from all three Services in future operations.

253. The *casualty reporting systems* of all three Services were rapidly expanded for the operation. For example, the Royal Navy set up their own casualty coordination centre at HMS Nelson in Portsmouth. It collated information from the task force via Fleet Headquarters and passed it to casualty aid centres in Service locations. Families were able to telephone with enquiries and at the height of the operation thousands of calls were dealt with every day. Wherever possible, next of kin were informed before news of an incident was made public. This was done by personal visits in the case of death or serious injury. In some cases the expectation that news could reach the public from other sources, such as Argentine claims, led to an announcement before all next of kin had been told.

Note:

¹ In all 255 task force lives, Service and civilian, were lost in the operation. A further 777 were injured. In many cases these injuries were not serious and the men were quickly able to rejoin their units. Over 700 of the injured are now fully employed once more.

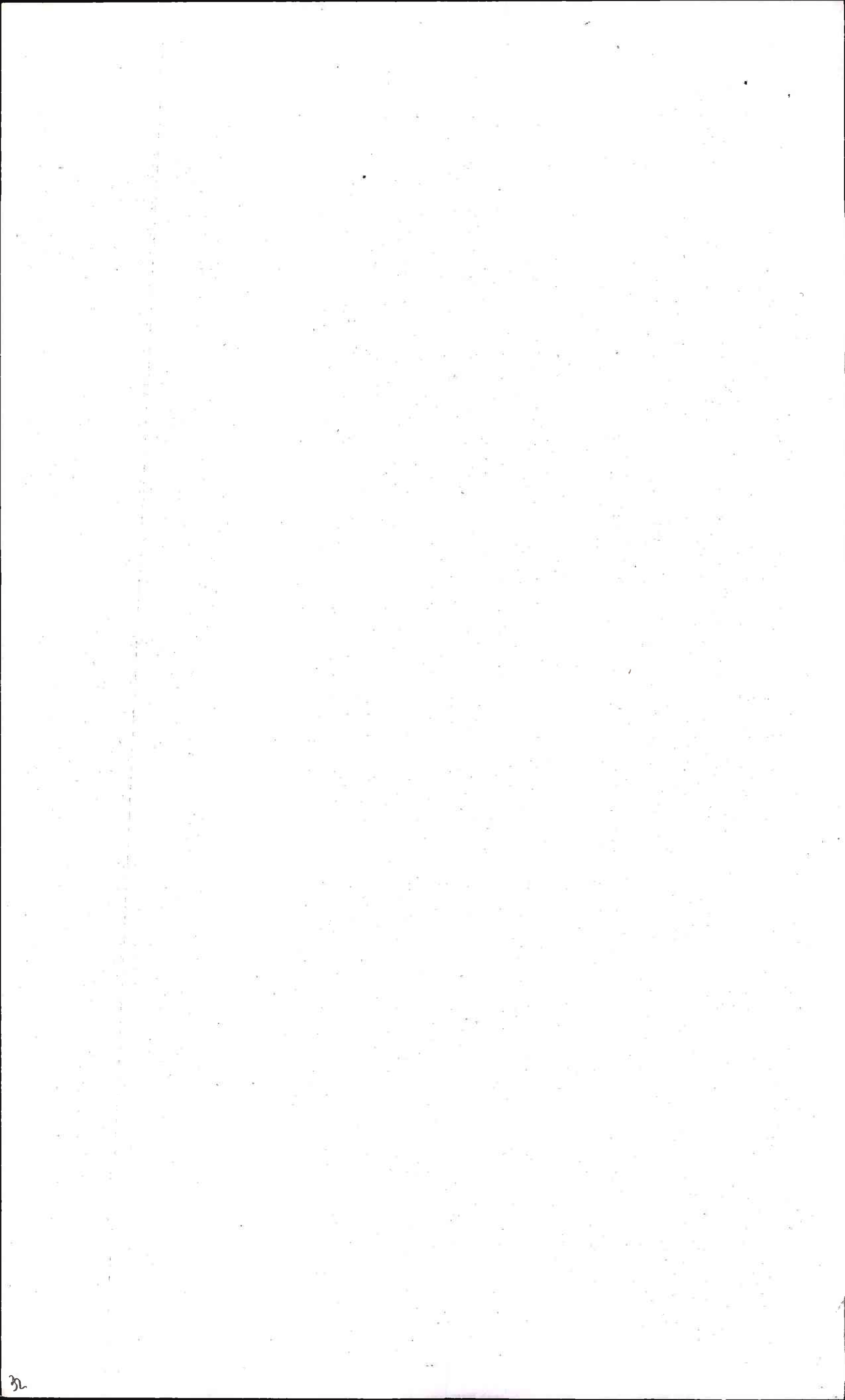
254. There were some errors and delays. It was difficult to establish the extent of casualties immediately after an incident at sea because of the constant helicopter transfer of personnel between ships, and the fact that survivors might be recovered by different means to different ships. It could take many hours to establish who was missing while other operations continued. Given these difficulties, the system worked as well as could be expected and improved during the operation.

255. By the end of the Campaign our forces had taken a total of 11,400 Argentine prisoners of war. The operational situation and the climate increased the considerable difficulties in handling so many prisoners—especially given the shortage of buildings on the Islands and the loss of tentage for 4,500 men in the *Atlantic Conveyor*. Nonetheless, all prisoners received adequate food, clothing and medical attention. The procedures laid down in the Third Geneva Convention were followed as closely as possible, although many prisoners had to be accommodated in ships. The International Committee of the Red Cross judged this unusual step reasonable in the circumstances. The problems raised by handling prisoners of war will be given more emphasis in training and planning in future.

Public Relations

256. The Government's firm objective from the outset was to provide as quickly as possible accurate information on developments in the diplomatic and military fields. In addition to the frequent reports which Ministers made to Parliament, No 10 Downing Street Press Office, the Ministry of Defence and the Foreign and Commonwealth Office provided regular briefings for the British and international press and for defence attachés. Abroad, our diplomatic missions, with the help of the Central Office of Information, launched and maintained an intensive effort with their local media to present the British case fully and accurately and, where necessary, to counter Argentine disinformation. At the same time they kept other Governments informed of the latest developments, canvassing support both in foreign capitals and at the United Nations. Arrangements were also made to convey a sizeable British press corps to the South Atlantic.

257. It was crucial that public opinion, both at home and abroad, understood and supported our cause. Without the support of the British people it would not have been possible to mount and sustain the operation. It was vital to retain the support of friends and Allies abroad. That this was largely achieved is a measure of our success in providing a reliable account of the diplomatic and military developments. Of course there were problems. The need to delay or, in some cases, prevent altogether the publication of certain information on military operations caused considerable controversy at the time and continues to be the subject of widespread debate. It is easy to overlook the factors influencing the public release of certain categories of information. At all times our practice had to be consistent with the overriding dictates of national and operational security and the protection of the lives of the men and women of the task force in the South Atlantic. At the same time, we were



concerned to ensure that as far as possible their families were caused the minimum of distress. Regrettably, press speculation and false Argentine propaganda sometimes obliged us to release information about the operation sooner than family considerations would otherwise have dictated. Another factor contributing to our difficulties was the absence on some occasions of sufficiently detailed and up to date situation reports from the task force. To some extent this can be attributed to the limitations imposed by our communication systems, which did not always have the capacity to meet the requirements of the press on top of the vast flow of vitally important operational traffic.

258. These matters deserve careful and considered analysis. The Ministry of Defence has therefore commissioned a wide-ranging study by University College, Cardiff into the relationship between the media and the Government in a time of armed conflict. In addition, the House of Commons Defence Committee is currently conducting an extensive inquiry into the way in which these matters were handled during the crisis and we shall wish to take its report into account in our analysis. Meanwhile, a number of practical improvements are being made in the light of the Falklands experience, including new arrangements for accrediting journalists to military units and more extensive training opportunities for public relations officers. The Ministry of Defence is also discussing with the press the extent to which the difficulties which arose could be avoided in future. A special working party will be set up to consider whether any new measures, including the introduction of a system of censorship, are necessary in order to protect military information immediately before and during an operation.

Part 3

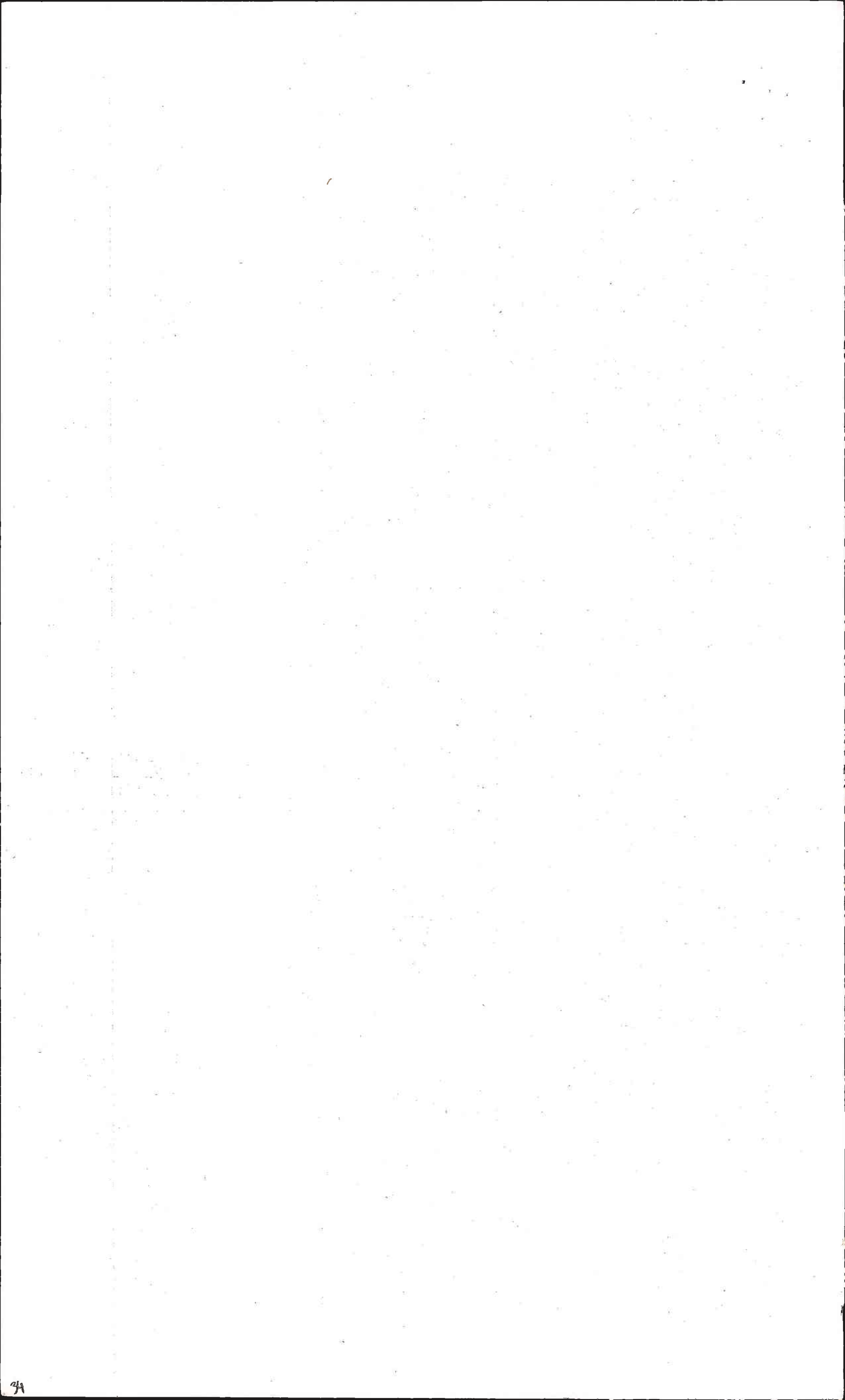
The Future

301. We have learned a great deal from the Falklands Campaign. Many of the lessons are not new but they are no less important for that. We have seen again the value of professional, well-motivated forces capable of responding quickly and imaginatively to the unexpected. The Armed Forces have demonstrated their capability to operate out of the NATO area in the most difficult circumstances and on the other side of the world; and they have gained direct experience of such an operation and the logistic effort necessary to support it. We now intend to introduce new and additional equipments to increase the mobility, flexibility and readiness for operations within the NATO area and elsewhere.

302. This is not to say that we now take a different view of the major threats to the security of the United Kingdom, which comes from the Soviet Union and its Warsaw Pact allies. The remorseless growth in the size and sophistication of the Soviet armed forces, and the disposition of Soviet leaders to exploit their military power for political purposes—directly or indirectly—continues unabated. It is still in Europe that we and our Allies face the greatest concentration of Warsaw Pact forces. In *The Way Forward* (Cmd 8288) we identified the four main roles in which the Armed Forces help to counter these threats: providing an independent element of strategic and theatre nuclear forces committed to the Alliance; defending the United Kingdom homeland; making a major land and air contribution on the European mainland; and deploying a major maritime capability in the Eastern Atlantic and Channel. These remain the priority for our defence effort—and the enhancement and modernisation of the forces devoted to these tasks must still have the first call on our resources.

303. *The Way Forward*, however, also drew attention to the significance of threats posed to Western interests outside the NATO area. In countering these threats, our military effort plays a part at three levels:—

- a. Military assistance and training to countries of importance to Western interests which request our help. (This year we have military training teams varying in size from one man to more than 150 in some countries; and in the year ending April 1982 we trained almost 10,000 students from non-NATO countries at defence establishments in this country.)
- b. Periodic deployment of British forces, for example Naval task groups, to demonstrate a presence; to acquire experience of conditions in the theatre; and to exercise with the forces of our Allies and friends.



real terms by which the defence budget is planned to grow annually over the period until 1985/86. These developments mean that we can now finance significant force enhancements over the next few years.

307. We have already announced that:

—following our experience in the Falklands, we intend that two carriers should be available for deployment at short notice. To ensure this a third carrier will be maintained in refit or reserve and we shall now proceed with the sale of HMS *Invincible*.

—restrictions on Armed Forces' training and activity levels have been lifted. This will help to maintain the high standards of professionalism and fitness demonstrated by all three Services during the conflict.

308. During the conflict a great variety of equipments and improvements were specially introduced for the forces involved in the operation, exceeding £200 million in value and including:—

- a. The equipping of Vulcan, Nimrod and Hercules aircraft for the air-to-air refuelling receiver rôle, and the conversion of Vulcan and Hercules aircraft to the tanker rôle.
- b. The modification of Nimrod aircraft to carry bombs, the Harpoon anti-ship missile, and Sidewinder AIM 9L air-to-air missiles.
- c. The purchase of additional Sidewinder AIM 9L missiles for Harrier and conversion of RAF Harrier GR3 aircraft to carry them.
- d. The introduction of laser-guided bombs for RAF Harrier GR3 aircraft.
- e. The adaptation of the Sea Wolf ship-borne missile system more effectively to deal with low-level aircraft attacks.
- f. The fitting of a close-in weapon system to HMS *Illustrious*.
- g. The accelerated introduction into service of the Sea Skua anti-ship missile and Sub-Harpoon submarine-launched anti-ship missiles.
- h. The further development of ship-borne chaff and electronic counter measures to deal with sea-skimming missiles; and development of chaff and ECM for tactical aircraft and helicopters.

Most of this equipment remains available for use by the Services, whether in the South Atlantic or elsewhere.

309. The replacement of ships and other equipment lost in the Campaign enhance the capabilities of the Services, since replacements will be newer and in many cases more capable than their predecessors; the major orders are for:

- a. Replacement of the two Type 42 destroyers and two Type 21 frigates. Five Type 22 frigates will be ordered, of which one has already been announced and is not related to the Falklands losses. Three of these ships will be of the new Batch III design equipped with the 4.5 inch gun and with added point defence capability.
- b. A replacement for the logistic landing ship, RFA *Sir Galahad*. Design work on the new ship is in hand and we expect to place an order during 1983. RFA *Sir Tristram* is to be brought back to the United Kingdom and we hope that it can be repaired.
- c. The replacement of all lost Harrier aircraft and Sea King, Lynx and Chinook helicopters. (See also paragraph 311 below.)

310. We shall maintain a sizeable garrison on the Falkland Islands for the foreseeable future including air defence radars, RAF Phantom, Harrier and Hercules aircraft, Chinook and Sea King helicopters, Rapier air defence systems, an infantry battalion, and supporting arms. Nuclear-powered submarines, destroyers, frigates, Sea King helicopters and patrol craft, with afloat support, will be deployed in the South Atlantic; and the ice patrol ship, HMS *Endurance*, will be retained for service there. These forces can be reinforced as necessary by others already identified for this purpose and we shall periodically mount exercises to test our reinforcement capability. This will be significantly enhanced by the further improvements outlined below.

311. In the light of the conflict and in order to provide for the defence of the Falkland Islands without a major diversion of effort from the Armed Forces' primary NATO roles, we intend—with the funds now available—to make a number of further additions and improvements to the Armed Forces. These measures will increase our total force levels, though those forces based in the Falkland Islands will be at a lower state of readiness for NATO than when in the European theatre. The main enhancements to be made are:—

- a. The purchase of wide-bodied tankers which will considerably enhance the capacity of the Royal Air Force's tanker force and will be a significant force multiplier for all the Royal Air Force's combat aircraft. Additionally, they will greatly enhance the Armed Forces' strategic mobility given their capacity also to carry large numbers of troops and heavy equipment, both for operations in Europe and elsewhere. They will transform our ability to support the Falkland Islands garrison and to reinforce it quickly.
- b. The purchase of at least 12 Phantom F-4 J aircraft (subject to the satisfactory completion of negotiations currently in train) which will form a squadron for the air defence of the United Kingdom to replace the squadron of Phantom FGR2 aircraft committed to the South Atlantic. The deployment between theatres of this increased total Phantom force will be adjusted as and when necessary and can be quickly accomplished. For example, two Phantoms could be moved from Ascension Island to the Falkland Islands supported by a single wide-bodied tanker.
- c. The purchase of 24 additional Rapier fire units for the Army and the Royal Air Force.
- d. The purchase of five more Chinook medium-lift helicopters in addition to the three replacements already referred to. Each has the ability to lift up to 80 men and adds greatly to the mobility of our land forces; their value was clearly demonstrated by the contribution made by the single Chinook helicopter which was available in the Campaign.
- e. An increase in the previously planned number of front-line destroyers and frigates. Under these plans up to four ships would have been placed in the standby squadron by 1985. We have now decided in view of the Falklands commitment that all these destroyers and frigates should for some time yet be retained in the running Fleet. We have also taken steps to run on ships to offset the battle losses and front-line numbers will be about 55 at 1 April 1983 and 1984.

- f. The provision of point defence for the carriers HMS *Invincible* and HMS *Ark Royal*, the assault ships HMS *Intrepid* and *Fearless*, the destroyer HMS *Bristol* and all the Type 42 destroyers.
- g. In addition to replacement of all the battle losses, the purchase of six Sea Harrier aircraft and six Sea King ASW helicopters, as announced in July.
- h. The purchase of Searchwater radar and associated avionics equipment for Sea King helicopters in order to equip each of the operation carriers with an organic AEW capability.
- i. In the light of rates of consumption during the Falklands Campaign both of ammunition and stores, we are reviewing the size and composition of the stockpile intended to support operations outside the NATO area, and its relationship to NATO war stocks. We propose to increase substantially the number and range of items in this stockpile at a cost of at least £10 million. Additional stocks of ammunition and other equipments are being procured for basing in the Falkland Islands.

312. As indicated in Part 2 there is a case for a number of other force equipment enhancements in the light of the Falklands Campaign. Many of these, for instance more modern radar systems for our ships, extra night vision equipment for the Army and the JP 233 airfield denial weapon for the Royal Air Force, are already provided for in our forward programmes; others are not. The scope for further improvements in our forces will be assessed against available resources in the normal annual recosting of the defence programme as a whole, which will be completed during the early part of 1983.

Conclusion

313. The many useful lessons we have learned from the Falklands Campaign which are described in some detail in this White Paper, do not invalidate the policy we have adopted following last year's defence programme review. The Soviet Union — its policies and its military capabilities — continues to pose the main threat to the security of the United Kingdom and our response to that threat must have the first call on our resources. Following the Falklands Campaign, we shall now be devoting substantially more resources to defence than had been previously planned. In allocating these, we shall be taking measures which will strengthen our general defence capability by increasing the flexibility, mobility and readiness of all three Services for operations in support of NATO and elsewhere.

314. Above all, the success of the Falklands Campaign demonstrated conclusively the superb quality and commitment of British Servicemen. It showed the crucial rôle of the Merchant Navy, of civil servants on Royal Fleet Auxiliary ships, in the dockyards and elsewhere, and of British industry, of whom gave tireless and unstinting support to the task force. The quality and reliability of much Service equipment was proved, as was the ingenuity

and capacity for improvisation of the Services, defence establishments, and British industry. Finally, the Campaign confirmed that the British people and their Government have the will and resolve to resist aggression and the fortitude to withstand setbacks and casualties. We and our NATO Allies can draw confidence from this: the deterrent posture of the NATO Alliance as a whole has been strengthened.

Annex A

Composition of the Task Force and Supporting Elements

1. Ships of the Royal Navy

Serial	Type/Class	No	Ship
1.	Submarines: Fleet	5	<i>Conqueror, Courageous, Spartan, Splendid, Valiant</i>
	Oberon Class	1	<i>Onyx</i>
2.	ASW Carrier:	1	<i>Invincible</i>
3.	ASW/Commando Carrier:	1	<i>Hermes</i>
4.	Assault Ships:	2	<i>Fearless, Intrepid</i>
5.	Guided Missile Destroyers: County Class	2	<i>Antrim, Glamorgan</i>
	Type 82	1	<i>Bristol</i>
	Type 42	5	<i>Cardiff, Coventry, Exeter, Glasgow, Sheffield</i>
6.	General Purpose Frigates: Leander Class	4	<i>Andromeda, Argonaut, Minerva, Penelope</i>
	Rothsary Class	2	<i>Plymouth, Yarmouth</i>
	Type 21	7	<i>Active, Alacrity, Ambuscade, Antelope, Ardent, Arrow, Avenger</i>
	Type 22	2	<i>Brilliant, Broadword</i>
7.	Offshore Patrol: Castle Class	2	<i>Dumbarton Castle, Leeds Castle</i>
8.	Mine Counter-Measures: Extra Deep Armed Team Sweep Trawlers ¹	5	<i>Cordelia, Farnella, Junella, Northella, Pic</i>
9.	Ice Patrol Ship:	1	<i>Endurance</i>
10.	Survey Ships ² :	3	<i>Hecia, Herald, Hydra</i>

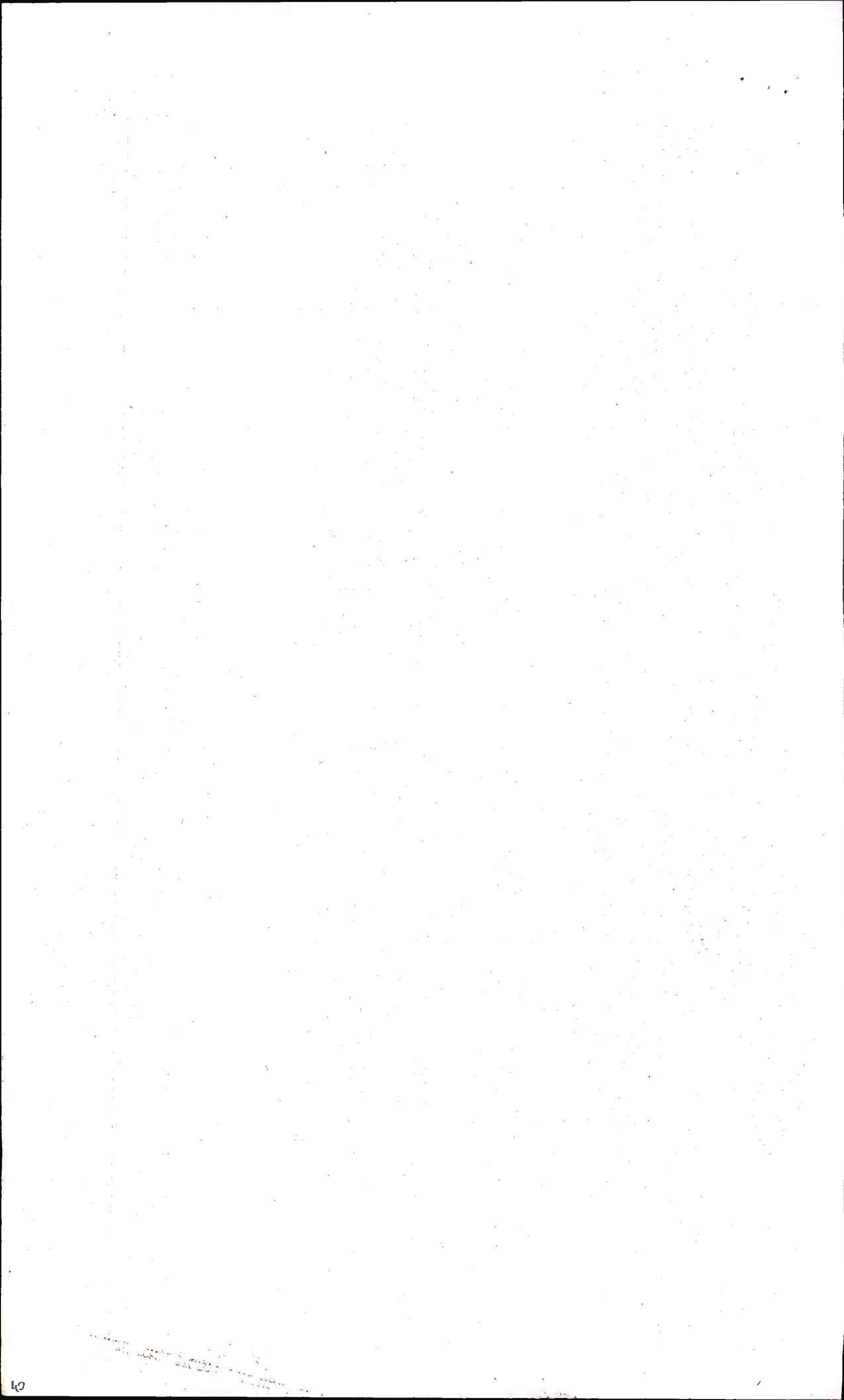
Notes:

¹ Taken up from trade, commissioned and manned by RN personnel.

² Employed as ambulance ships.

2. Squadrons of the Fleet Air Arm

Serial	Sqdn	Aircraft	Embarked in:
1.	737	Wessex Mk 3	County Class destroyers
2.	800	Sea Harrier	<i>Hermes</i>
3.	801	Sea Harrier	<i>Invincible</i>
4.	809	Sea Harrier	<i>Hermes, Invincible</i>
5.	899	Sea Harrier	<i>Hermes, Invincible</i>
6.	815	Lynx Mk 2	<i>Invincible, Hermes, Type 42 destroyers, Leander Class, Type 21 (except Active) and Type 22 frigates</i>
7.	820	Sea King Mk 5	<i>Invincible</i>
8.	824	Sea King Mk 2	<i>Fort Grange, Olmeda</i>
9.	825	Sea King Mk 2	<i>Atlantic Causeway, QE2</i>
10.	826	Sea King Mk 5	<i>Hermes, Fort Austin</i>
11.	829	Wasp	<i>Active, Endurance, Plymouth, Yarmouth, Survey ships, Contender Bezan</i>
12.	845	Wessex Mk 5	<i>Invincible, Fort Austin, Intrepid, Resource, Tidepool, Tidespring</i>
13.	846	Sea King Mk 4	<i>Hermes, Fearless, Intrepid, Canberra, Elk</i>
14.	847	Wessex Mk 5	<i>Engadine, Atlantic Causeway</i>
15.	848	Wessex Mk 5	<i>Olna, Regent, Atlantic Conveyor</i>

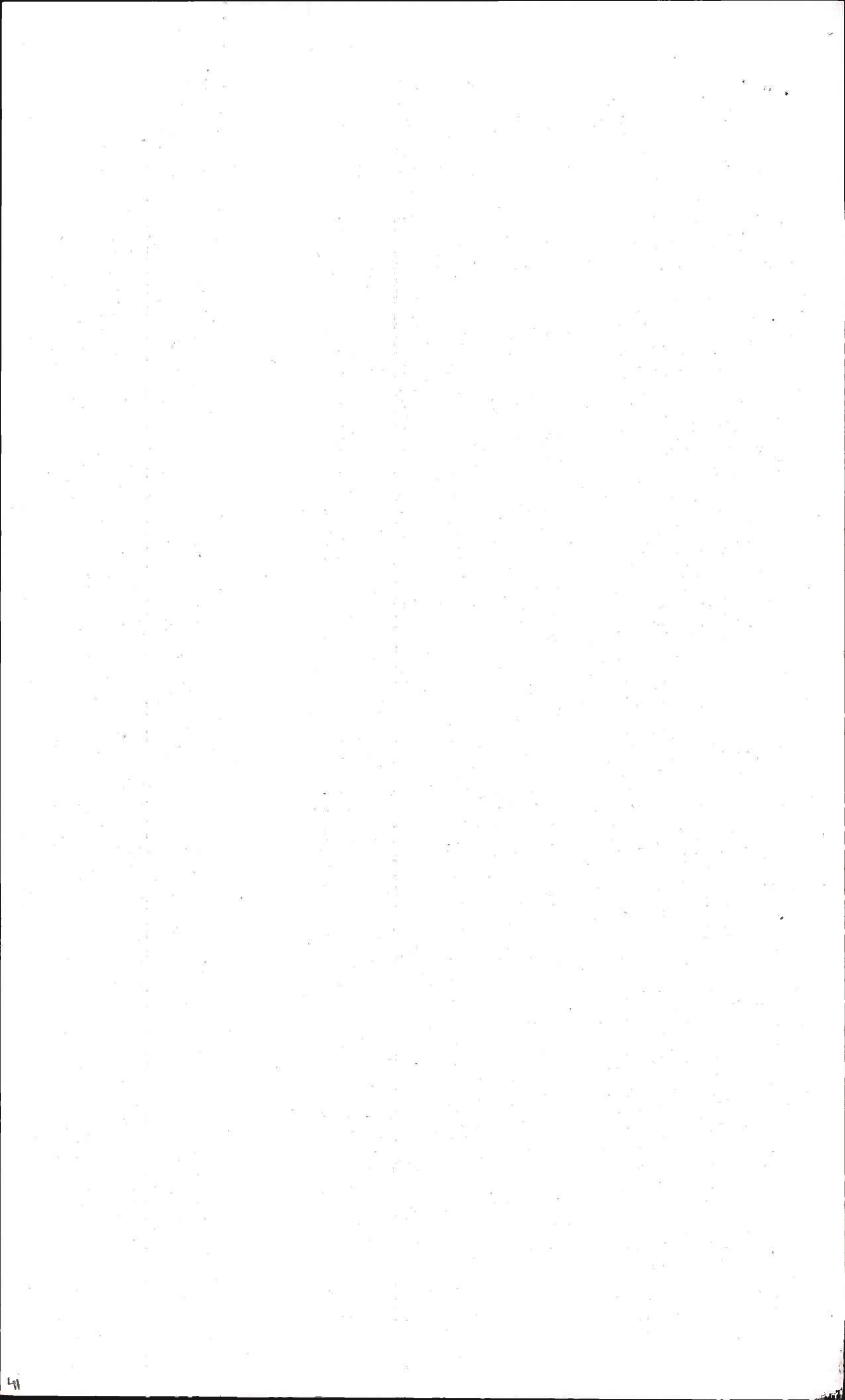


3. Ships of the Royal Maritime Auxiliary Service

Serial	Type/Class	No	Ship
1.	Mooring and Salvage Vessel	1	<i>Goosander</i>
2.	Tug	1	<i>Typhoon</i>

4. Ships of the Royal Fleet Auxiliary

Serial	Type/Class	No	Ship
1.	Fleet Tankers, Large:	4	<i>Olméda, Olua, Tidepool, Tidespr</i>
2.	Fleet Tankers, Small:	1	<i>Blue Rover</i>
3.	Support Tankers:	5	<i>Appleleaf, Bayleaf, Brambleleaf,</i> <i>Pearleaf, Plumleaf</i>
4.	Fleet Replenishment Ships:	4	<i>Fort Austin, Fort Grange, Reson</i> <i>Regent</i>
5.	Stores Support Ship:	1	<i>Stronness</i>
6.	Helicopter Support Ship:	1	<i>Engadine</i>
7.	Landing Ships, Logistic:	6	<i>Sir Bealivere, Sir Galahad,</i> <i>Sir Geraint, Sir Lancelot,</i> <i>Sir Percivale, Sir Tristram.</i>



5. Ships taken up from Trade

Serial	Ship	Serial	Ship	Serial	Ship
Liners		Roll-on Roll-off General Cargo		General Cargo	
1.	SS Canberra	19.	SS Atlantic Conveyor	32.	MV Avelona
2.	RMS Queen Elizabeth II	20.	SS Atlantic Conveyor	33.	MV Geestport
3.	SS Uganda	21.	MV Baltic Ferry	34.	MV Laertes
Tankers		22.	MV Contender Bezzant	35.	MV Lycaon
4.	MV Alvega	23.	MV Elk	36.	MV Saxonia
5.	MV Anco Charger	24.	MV Europic Ferry	37.	MV Strathewe
6.	MV Balder London	25.	MV Nordic Ferry	Offshore Support Vessels	
7.	MV British Avon	26.	MV Tor Caledonia	38.	MV British En III
8.	MV British Dart	Container Ship		39.	MV Stena Insp
9.	MV British Esk	27.	MV Astronomer	40.	MV Stena Sea
10.	MV British Tamar	Passenger/General Cargo		41.	MV Wimpey S
11.	MV British Toy	28.	MV Norland	Tugs	
12.	MV British Test	29.	TEV Rangatira	42.	MT Irishman
13.	MV British Trent	30.	MV Saint Edmund	43.	MT Salvagem
14.	MV British Wye	31.	RMS Saint Helena	44.	MT Yorkshire
15.	MV Fort Toronto	Cable Ships		45.	C S Iris
16.	MV G A Walker				
17.	MV Scottish Eagle				
18.	MV Shell Eburna				

Note:

1. In addition MVs Cordella, Farnella, Junella, Northella and Pica were taken up and commissioned as mine counter-measures vessels.

6. Royal Marines

Serial

1. 3 Commando Brigade Headquarters and Signal Squadron Royal Marines
 2. 40 Commando Royal Marines
 3. 42 Commando Royal Marines
 4. 45 Commando Royal Marines
 5. 3 Commando Brigade Air Squadron Royal Marines
 6. The Commando Logistic Regiment Royal Marines
 7. The Special Boat Squadron
 8. Royal Marines Detachments (including landing craft crews)
 9. Air Defence Troop Royal Marines
 10. 1st Raiding Squadron Royal Marines
 11. Mountain and Arctic Warfare Cadre Royal Marines
 12. Y Troop Royal Marines
 13. The Bands of Her Majesty's Royal Marines Commando Forces and Flag Officer 3rd Flotilla
 14. Field Records Office Royal Marines
-

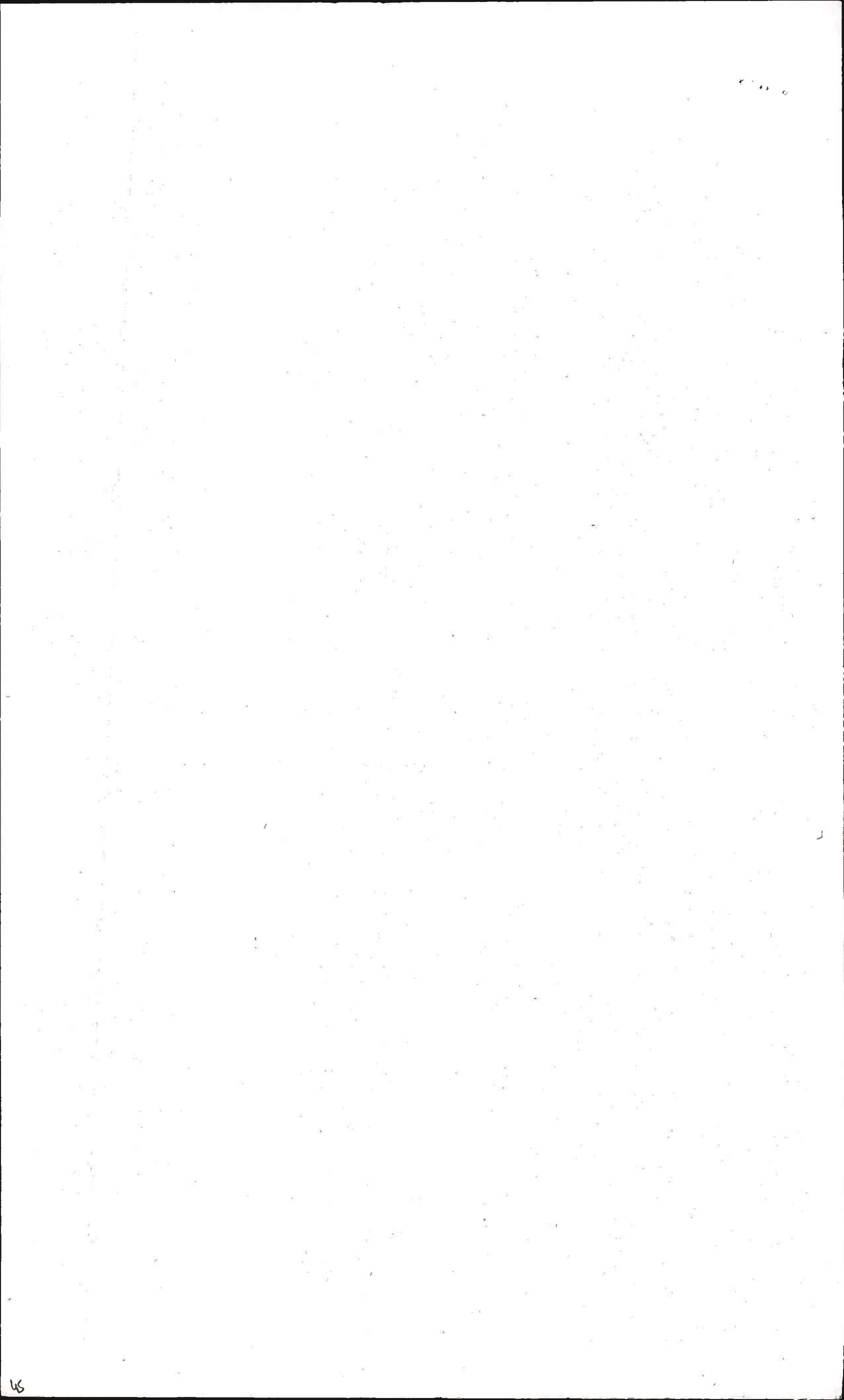
7. Army Units

Serial

1. Two troops The Blues and Royals
2. 4th Field Regiment Royal Artillery (less one battery)
3. 12th Air Defence Regiment Royal Artillery (less one battery)
4. 29th Commando Regiment Royal Artillery
5. Elements 43 Air Defence Battery, 52nd Guided Weapons Regiment Royal Artillery
6. Elements 49th Field Regiment Royal Artillery
7. Elements Royal School of Artillery Support Regiment
8. Elements 33 Engineer Regiment
9. 36 Engineer Regiment (less one squadron)
10. Elements 38 Engineer Regiment
11. 59 Independent Commando Squadron Royal Engineers
12. Elements Military Works Force
13. Elements 2 Postal and Courier Regiment Royal Engineers
14. Elements 14th Signal Regiment
15. Elements 30th Signal Regiment
16. 5th Infantry Brigade Headquarters and Signals Squadron
17. Elements 602 Signal Troop
18. 2nd Battalion Scots Guards
19. 1st Battalion Welsh Guards
20. 1st Battalion 7th Duke of Edinburgh's Own Gurkha Rifles
21. 2nd Battalion The Parachute Regiment
22. 3rd Battalion The Parachute Regiment
23. Elements 22nd Special Air Service Regiment
24. 656 Squadron Army Air Corps
25. Elements 17 Port Regiment Royal Corps of Transport

Serial

- | | |
|-----|---|
| 26. | Elements 29 Transport and Movements Regiment Royal Corps of Transport |
| 27. | Elements 47 Air Despatch Squadron Royal Corps of Transport |
| 28. | 407 Troop Royal Corps of Transport |
| 29. | Elements The Joint Helicopter Support Unit |
| 30. | 16 Field Ambulance Royal Army Medical Corps |
| 31. | Elements 19 Field Ambulance Royal Army Medical Corps |
| 32. | Elements 9 Ordnance Battalion Royal Army Ordnance Corps |
| 33. | 81 Ordnance Company Royal Army Ordnance Corps |
| 34. | 10 Field Workshop Royal Electrical and Mechanical Engineers |
| 35. | Elements 70 Aircraft Workshop Royal Electrical and Mechanical Engineers |
| 36. | Elements 160 Provost Company Royal Military Police |
| 37. | 6 Field Cash Office Royal Army Pay Corps |
| 38. | 601 Tactical Air Control Party (Forward Air Controller) |
| 39. | 602 Tactical Air Control Party (Forward Air Controller) |
| 40. | 603 Tactical Air Control Party (Forward Air Controller) |
-



8. Royal Air Force Units

Serial	Flying Squadrons	Aircraft
1.	1 (F) Squadron ¹	Harrier GR3
	Detachments of:	
2.	10 Squadron	VC 10 C Mk 1
3.	18 Squadron	Chinook HC Mk 1
4.	24 Squadron	Hercules C Mk 1
5.	30 Squadron	Hercules C Mk 1
6.	47 Squadron	Hercules C Mk 1
7.	70 Squadron	Hercules C Mk 1
8.	29 Squadron	Phantom FGR2
9.	42 Squadron	Nimrod Mk 1
10.	44 Squadron	Vulcan B2
11.	50 Squadron	Vulcan B2
12.	101 Squadron	Vulcan B2
13.	55 Squadron	Victor K2
14.	57 Squadron	Victor K2
15.	120 Squadron	Nimrod Mk 2
16.	201 Squadron	Nimrod Mk 2
17.	206 Squadron	Nimrod Mk 2
18.	202 Squadron	Search and Rescue Sea King
	Royal Air Force Regiment	Description
19.	3 (Regiment)	Wing Headquarters Unit
20.	15 (Regiment)	Squadron Detachment Field Squadron
21.	63 (Regiment)	Squadron (Rapier)
	Other Units	
22.	Tactical Communications Wing	
23.	Tactical Supply Wing	
24.	Explosive Ordnance Disposal Team	

Note:

¹ Embarked in HMS *Hermes* and ashore.

Annex B

Weapons Systems Performance against Enemy Aircraft

Serial	Weapon System	Aircraft Kills Confirmed	Probable
1.	Sea Harrier with Sidewinder AIM 9L Missile	16	1
2.	Sea Harrier with 30mm Aden Cannon	4	2
3.	Sea Wolf	5	—
4.	Sea Dart	8	—
5.	Sea Cat	8	2
6.	Rapier	14	6
7.	Blowpipe	9	2
8.	Stinger	1	—
9.	Others ²	7	1
	Total ³	72	14

Notes:

¹ A probable kill is one where there are reasonable grounds to believe an aircraft destroyed, but there is insufficient weight of collateral evidence to claim a confirmed kill.

² Others comprise 4.5" gun, 20mm, 40/60mm Bofors, Rarden Cannon and small arms.

³ An estimated total of 117 Argentine aircraft were destroyed (including probable and those destroyed on the ground). This total comprises: 45 A4 Skyhawk, 27 Mirage, 21 Pucara, 4 Mentor, 3 Aermacchi, 3 Canberra, 2 Skyvan, 1 C Hercules, 1 Lear Jet, 6 Puma, 2 Bell Huey and 2 Chinook (the last three aircraft named being helicopters).

Annex C

Ship and Aircraft Losses

Ships

Serial	Date	Ship
1.	4 May	HMS <i>Sheffield</i>
2.	21 May	HMS <i>Ardent</i>
3.	23 May	HMS <i>Antelope</i>
4.	25 May	HMS <i>Coventry</i>
5.	25 May	<i>Atlantic Conveyor</i>
6.	8 June	RFA <i>Sir Galahad</i>

Aircraft

Lost to Enemy Fire

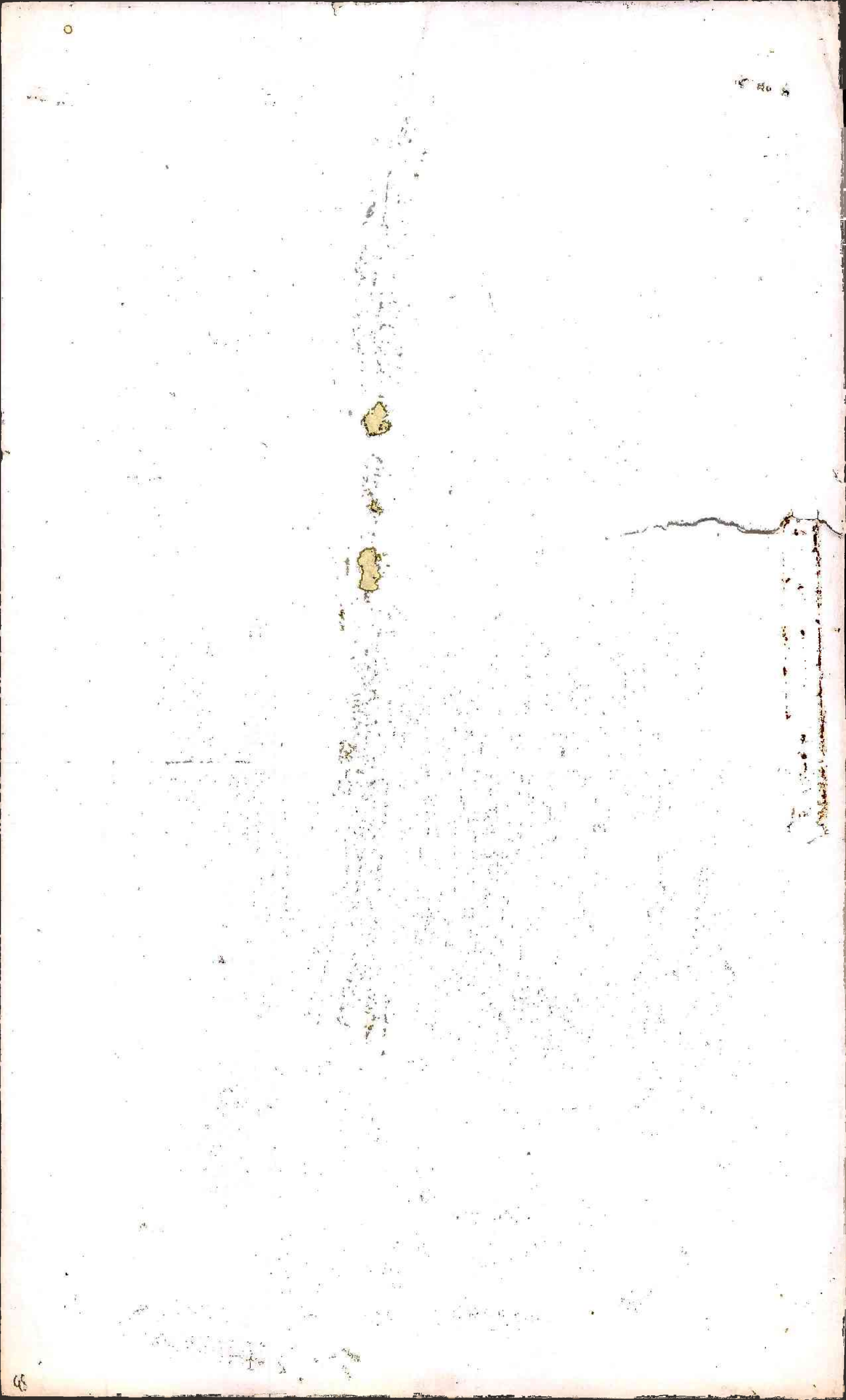
Serial	Date	Aircraft Type	Parent Service
1.	4 May	Sea Harrier	RN
2.	21 May	Lynx ¹	RN
3.	21 May	2 x Gazelle	RM
4.	21 May	Harrier GR3	RAF
5.	25 May	6 x Wessex 5 ²	RN
6.	25 May	Lynx ²	RN
7.	25 May	3 x Chinook ³	RAF
8.	25 May	Lynx ³	RN
9.	27 May	Harrier GR3	RAF
10.	28 May	Scout	RM
11.	30 May	Harrier GR3	RAF
12.	2 June	Sea Harrier	RN
13.	6 June	Gazelle	Army
14.	12 June	Wessex 3 ⁴	RN

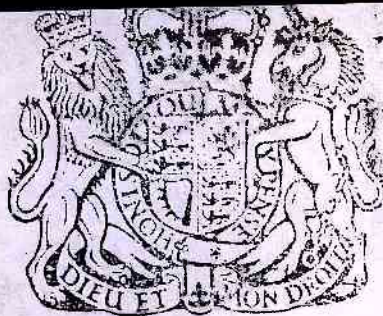
Other Losses

Serial	Date	Aircraft Type	Parent Service
1.	22 April	2 x Wessex 5	RN
2.	23 April	Sea King Mk 4	RN
3.	6 May	2 x Sea Harrier	RN
4.	12 May	Sea King Mk 5	RN
5.	18 May	Sea King Mk 5	RN
6.	19 May	Sea King Mk 4	RN
7.	20 May	Sea King Mk 4	RN
8.	24 May	Sea Harrier	RN
9.	29 May	Sea Harrier	RN
10.	3 June	Harrier GR3	RN

Notes:

- ¹ Lost in bomb attack on HMS *Ardent*.
- ² Lost in *Atlantic Conveyor*.
- ³ Lost when HMS *Coventry* sank.
- ⁴ Lost in missile attack on HMS *Glamorgan*.





The Falklands Campaign The Lessons

*Presented to Parliament by the Secretary of State for Defence
by Command of Her Majesty
December 1982*

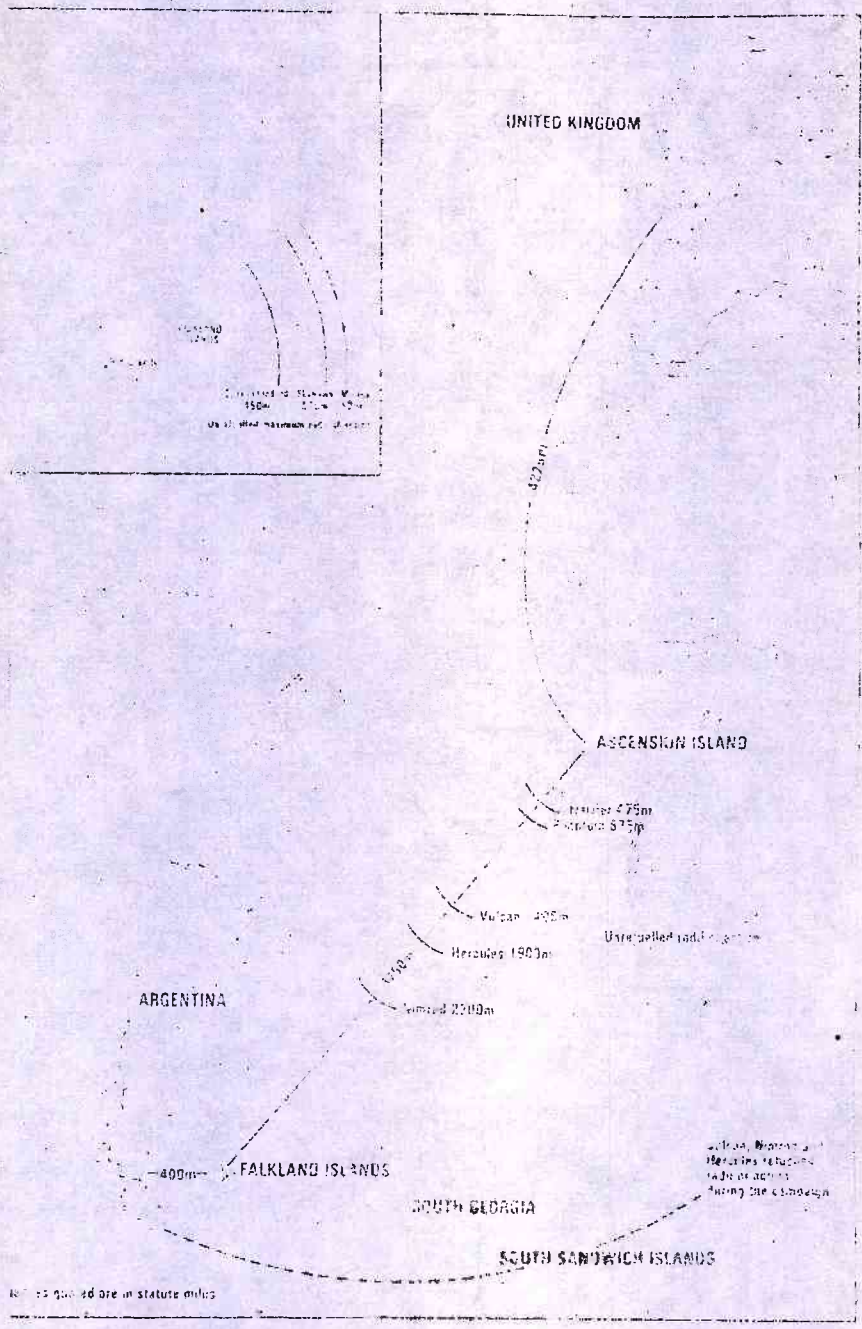
LONDON

HER MAJESTY'S STATIONERY OFFICE

	Page
Part 1. The Operation	5
Deployment	6
From South Georgia to San Carlos	7
From San Carlos to Fitzroy	10
Advance on Port Stanley	12
Chronology	13
Part 2. The Lessons	15
Introduction	15
Crisis Management and Command and Control	15
on	16
Maritime Operations	16
Land Operations	17
Special Forces	17
Equipment	18
Procurement and Improvisation	24
Logistics and Personnel	25
Public Relations	28
Part 3. The Future	31
Conclusion	35

Annexes

A. Composition of the task force and supporting elements:	
Table 1—Ships of the Royal Navy	37
Table 2—Squadrons of the Fleet Air Arm	38
Table 3—Ships of the Royal Maritime Auxiliary Service	39
Table 4—Ships of the Royal Fleet Auxiliary	39
Table 5—Ships taken up from trade	40
Table 6—Royal Marines	41
Table 7—Army Units	42
Table 8—Royal Air Force Units	44
B. Weapons systems performance against enemy aircraft	45
C. Ship and aircraft losses	46



UNITED KINGDOM

ASCENSION ISLAND

ARGENTINA

FALKLAND ISLANDS

SOUTH GEORGIA

SOUTH SANDWICH ISLANDS

Distances given are in statute miles

Volcanic eruption in 1982-83
caused extensive
damage to the islands

The Operation

101. On 2 April 1982 in an act of unprovoked aggression against British sovereign territory and British people Argentine forces invaded the Falkland Islands. The next day they invaded South Georgia. These invasions were launched despite urgent calls upon the Argentine Government from the President of the USA, the President of the United Nations (UN) Security Council and the Secretary General of the UN to desist from military action. The invasion was immediately condemned by the UN Security Council in its Resolution 502. That Resolution went on to call for an immediate withdrawal of the Argentine forces occupying the Falkland Islands, and for a peaceful settlement of the dispute.

The Government made clear from the first its willingness to accept and abide by Resolution 502. We engaged in intense and prolonged diplomatic activity in pursuit of a peaceful solution. But we could not depend upon it. We therefore took military steps intended to put pressure on Argentina to withdraw and to make possible our repossession of the Islands by force if that should ultimately prove necessary. Three days after the invasion HMS *Hermes* and HMS *Invincible* left the United Kingdom to head what was to become the largest task force in recent history.

103. While diplomatic efforts continued the net was gradually drawn more tightly around the Argentine garrison on the Falklands. On 12 April we imposed a maritime exclusion zone of 200 miles around the Falklands against Argentine naval ships. On 23 April we warned that any approach by Argentine forces which could amount to a threat to interfere with the mission of British forces in the South Atlantic would be dealt with appropriately. On 25 April the task force repossessed South Georgia. The recapture of South Georgia dealt a psychological blow to the Argentine Government and provided clear evidence of the United Kingdom's resolve and willingness to resort to military action if all other courses were closed. It also gave the task force an anchorage in the South Atlantic. On 29 April we warned that all Argentine vessels following the task force would be liable to attack. Despite this increasing military pressure, however, Argentina showed no signs of yielding on any points which could make negotiations possible.

104. We took further measures: on 30 April a total exclusion zone was imposed; on 1 May Port Stanley airfield was bombed; and on 7 May we warned that any Argentine warship or military aircraft over 12 miles from the Argentine coast would be treated as hostile. Even at this stage the way was open for the Argentine Government to accept a peaceful withdrawal of their troops. They declined, and it became clear that the Falklands would have to be retaken by force.

Major General Moore, the Land Force Commander, accepted the surrender of General Menéndez and his force at Port Stanley. It was by any standards a brilliant campaign, marked by exceptional logistic planning and improvisation, and carried through with outstanding skill and fortitude.

Deployment

106. To despatch a task force in such a short space of time was a remarkable achievement. It was the result of close cooperation between the Services, the Merchant Navy, the Royal Dockyards and commercial ports, the stores and transport organisations of the Ministry of Defence, and Industry. The task force had to be stocked and provisioned for at least three months at sea. Many of the merchant ships required extensive modification to prepare them for their new rôle. Eventually over 110 ships were deployed.¹ These included 44 warships; 22 from the Royal Fleet Auxiliary (RFA); and 45 merchant ships whose civilian crews were all volunteers.

107. The Falkland Islands lie 8,000 miles south-west of the United Kingdom and over 3,500 miles from Ascension Island; but only 400 miles from the Argentine mainland. The task force needed to be self-sufficient in food, water, fuel, ammunition and all the other military equipment it might require, and transport and logistic arrangements were vitally important. The ships of the RFA and the Merchant Navy and the Royal Air Force's transport aircraft were to be the task force's lifeline. Merchant shipping alone transported 9,000 personnel, 100,000 tons of freight and 95 aircraft to the South Atlantic. The supply chain carried 400,000 tons of fuel. RFA support ships transferred ammunition, dry cargo and fuel on some 1,200 occasions. In addition to more than 300 helicopter transfers, British forces established a joint forward operating base at Ascension Island. The Royal Air Force moved over 5,800 people and 6,600 tons of stores through Ascension Island in more than 600 sorties by Hercules and VC10 aircraft. Hercules aircraft also made some 40 supply drops to the task force, which entailed mid-air refuelling in round-trips lasting, in many cases, over 25 hours. This massive logistic effort enabled the warships and the aircraft of the task force to operate continuously without returning to distant bases for provisions.

108. In the space of seven weeks a task force of 28,000 men and over 100 ships had been assembled, sailed 8,000 miles, effectively neutralised the Argentine navy and fought off persistent and courageous attacks from combat aircraft which outnumbered its own by more than six to one. This in itself was no mean feat, but the task force then put ashore 10,000 men on a hostile coast while under threat of heavy air attack; fought several pitched battles against an entrenched and well supplied enemy who at all times outnumbered our forces; and brought them to surrender within three and a half weeks.

Notes:

¹ Details of the composition of the task force and supporting elements are given in Annex A.

the Argentine submarine *Santa Fe* was struck on the surface some five miles from the main harbour at Grytviken. She was badly damaged and subsequently beached. The same day the Island was repossessed by Royal Marines and Special Forces (which comprise the Special Air Service (SAS) and the Special Boat Squadron (SBS) of the Royal Marines (RM)). On 1 May a Vulcan followed by Sea Harriers carried out their first attacks on the Falklands, and the first Argentine aircraft were shot down. The carrier group made a major demonstration of force, simulating an amphibious landing off Port Stanley which successfully drew the Argentines and revealed some of their defensive positions.

110. On 2 May HMS *Conqueror* detected the Argentine cruiser, *General Belgrano*, accompanied by two destroyers, sailing near to the total exclusion zone. Other Argentine ships were also thought to be probing our defences to the north of the zone. The *Belgrano*, and her escorts armed with Exocet missiles, posed a clear threat to the ships of the task force. She was therefore attacked and sunk by torpedoes. Thereafter major Argentine warships remained within 12 miles of the Argentine coast and took no further part in the Campaign. Argentine submarines continued to pose a serious threat, but no task force ships were successfully attacked.

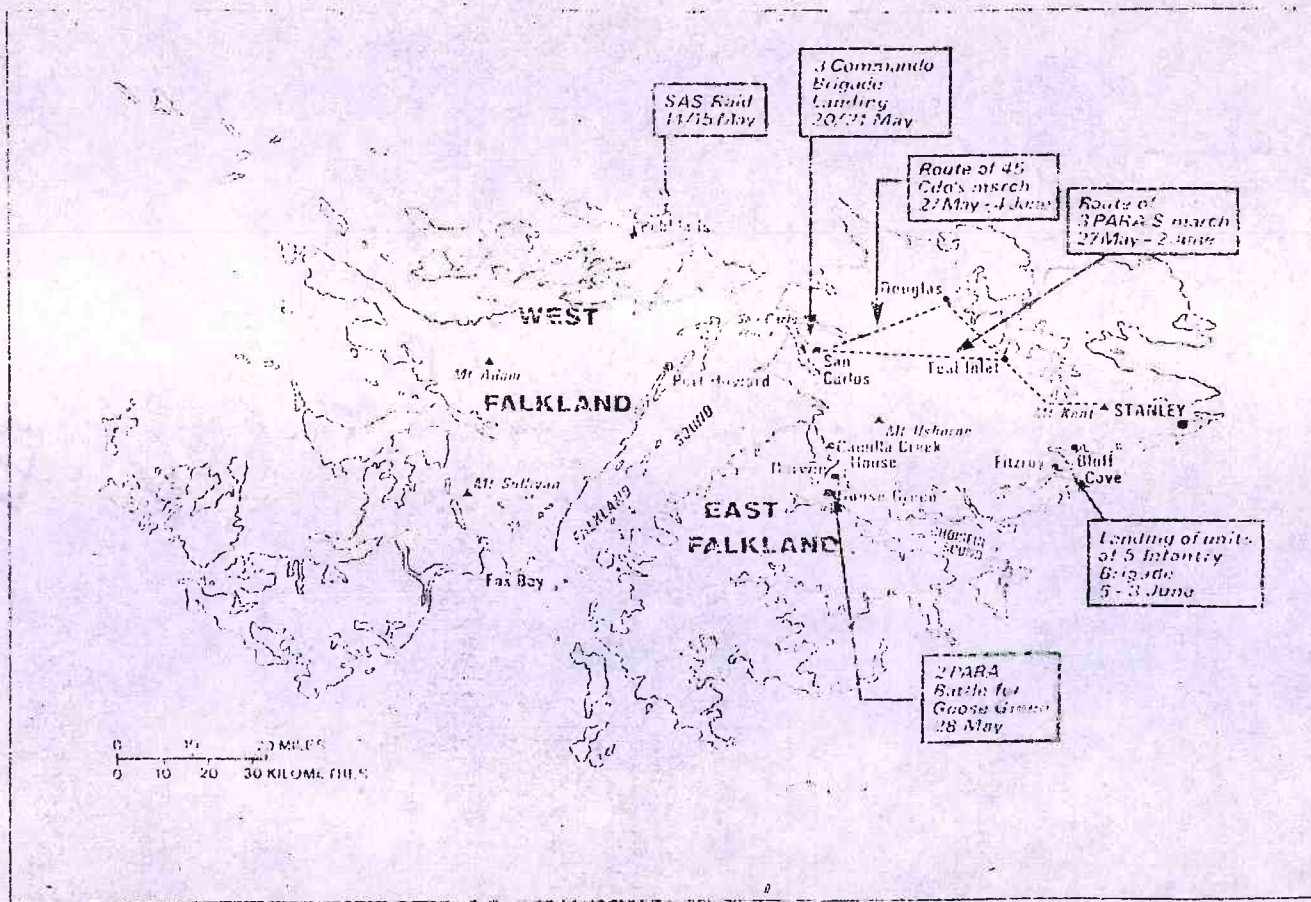
111. The task force suffered its first major loss on 4 May. HMS *Sheffield*, while on forward radar picket duty, was hit by an Exocet missile launched from an Argentine Super Etendard aircraft. The missile hit fuel tanks amidships and serious fires started, which filled the central section of the ship with acrid smoke. After nearly four hours, with the fires increasing in intensity, the Captain gave orders to abandon ship. 20 members of her crew died.

112. By mid-May the task force had accomplished two of its main tasks: the movement of the troops safely to the South Atlantic and the establishment of control of the seas around the Islands. The rôle of the carriers, HMS *Hermes* and HMS *Invincible*, was crucial at this and subsequent stages in providing air defence and the means of attacking enemy ships and ground positions, while their helicopters provided constant anti-submarine protection.

113. It was now necessary to put land forces ashore in sufficient strength to repossess the Islands. San Carlos was chosen as the site for the amphibious landing because it offered a good anchorage which could be protected against submarine attack and was an area known to be lightly defended by the enemy and difficult for him to reinforce rapidly. The low hills surrounding the inlet afforded good protection against the risk of Exocet attack. Men of the SAS and the SBS had for some time been reconnoitring East and West Falkland. Taking advantage of the intelligence they had gained, and under cover of a Naval bombardment, the SAS carried out a daring night raid on Pebble Island on 15 May. They destroyed 11 Argentine aircraft on the ground.

114. On 20 May the main amphibious force moved towards San Carlos Water, taking advantage of an overcast sky and poor visibility, and keeping strict radio silence. Meanwhile Special Forces mounted a series of diversionary raids at various points around East Falkland. Under cover of Naval gunfire,

7



landing on the beach-head for the first time. The landing was made over four beaches. Helicopters operated continuously, moving stores and helping to establish the beach-head. The operation achieved complete tactical surprise. 5,000 men were safely landed, and what little opposition there was quickly collapsed. British losses in this phase were two helicopters and their crews.

115. The next morning brought clear blue skies, but the landing force had won a vital few hours to establish defensive positions and begin to set up their **Rapier** fire units. At mid-day the Argentine air force began a series of fierce and protracted attacks against the beach-head and the ships supporting it.

116. The Sea Harriers on combat air patrol provided the outer layer of defence. The second layer was provided by a pair of ships known as the 'missile trap', positioned off the northern entrance to Falkland Sound. These were usually a Type 42 destroyer armed with Sea Dart and a Type 22 frigate with Sea Wolf. The next layer of defence, which became known as the 'gunline', was a group of three or four ships inside the entrance to the Sound using every gun and missile system they possessed to fight off the incoming Argentine aircraft. Finally within the anchorage itself (nicknamed 'bomb alley'), where there were often up to eight troop or stores ships at any one time, the small calibre guns and Sea Cat missiles from the assault ships, HMS *Intrepid* and HMS *Fearless*, together with Blowpipe missiles, machine guns and notably the Rapier fire units on shore provided the final layer of defence.

117. The Argentine pilots were courageous and persistent in their attacks and ships of the task force suffered loss and damage during the first few days after the landing. On the 'gunline' we lost HMS *Ardent* and HMS *Antelope* on 21 and 23 May; 24 men died. Six other ships were damaged between 21 and 24 May. But the Argentines paid a heavy price. On 21 May British forces shot down some 15 attacking aircraft. When attacks resumed on 23 May, 10 attacking aircraft were destroyed; on 24 May a further 18 were shot down.

118. On 25 May, Argentina's National Day, the Argentine air force made a major effort against the task force. HMS *Coventry* had been in the 'missile trap' to the north-west and had successfully controlled Sea Harriers and shot down three aircraft herself. She was attacked at low level by waves of Skyhawk aircraft which overwhelmed her defences. She capsized quickly. Survivors were rescued by HMS *Broadsword* and helicopters; 19 men died. Air attacks on the beach-head now became much less frequent and British forces were safely established ashore. The battle of San Carlos had been won.

119. Away from the beach-head air attacks continued. On 25 May the merchant ship, *Atlantic Conveyor*, which had delivered Harriers to the task force and was carrying much needed supplies, including helicopters, was north-east of the Falklands. Two Exocet missiles, launched from Argentine Super Etendard aircraft, hit the *Atlantic Conveyor*. The ship was set on fire. The fire spread rapidly and the ship was abandoned with the loss of 12 lives. A third attack on the task force by air-launched Exocet on 30 May was successfully countered.

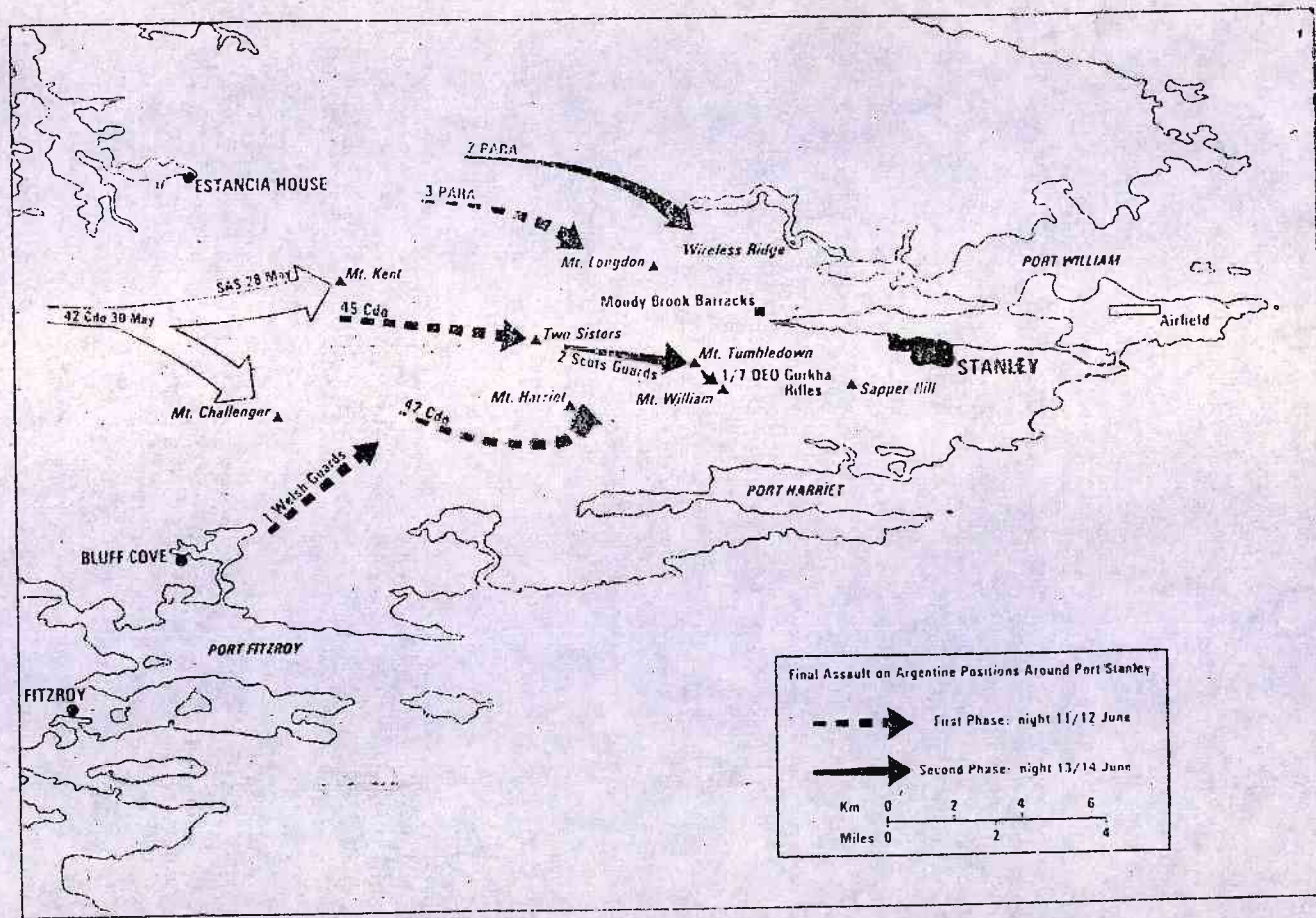
became the next objective. One threat to the flank of any attack on Port Stanley lay in the significant Argentine garrison and airfield at Darwin and Goose Green. 2 PARA was given the task of removing that danger and seeking an early victory. Overnight on 26/27 May one company of 2 PARA secured Camilla Creek House. After a 12 mile night approach march the rest of the battalion joined them and lay up for the day. An artillery troop of three 105mm light guns was flown into position to assist in the impending assault which started at 0200 hours on 28 May.

121. 2 PARA began by attacking Darwin, supported by Naval gunfire. The settlement was secured by mid-afternoon but the battalion was then faced with an advance on Goose Green, where the enemy were dug into strong defensive positions which had to be approached across the open ground of narrow isthmus. Harrier aircraft were called in to attack the Argentine positions. The battalion was attacked by Pucara light aircraft from Goose Green, one of which was shot down by a Blowpipe missile. The battalion eventually overcame stiff resistance and pushed the enemy back into the settlement. A timely strike by the Harriers considerably helped the progress of the paratroopers and the next day the Argentine commander surrendered. British dead totalled 17.

122. Besides securing the flank the battle was significant for two reasons. First it gave us a chance to assess the fighting qualities of the enemy. Second, and more importantly, by their outstanding performance against a numerically superior enemy 2 PARA established a psychological ascendancy over the Argentines which our forces never lost.

123. In the course of a remarkable march of 50 miles over difficult terrain in inhospitable conditions, 45 Cdo and 3 PARA secured Douglas Settlement and Teal Inlet on 30 May. Meanwhile the SAS had established a patrol base forward on Mount Kent. 42 Cdo, making best use of the helicopter lift available, leap-frogged forward to secure Mount Kent and Mount Challenger, the western approaches to Port Stanley. On the same day Major General Moore assumed command of all land operations. The 5th Infantry Brigade (5 Bde) came ashore on 1 June.

124. The Land Force Commander decided to press on quickly with the advance on Port Stanley and to commit 5 Bde to the South. When it was discovered that the Argentines had evacuated Fitzroy settlement 2 PARA moved forward rapidly to secure the area, which was an important point in the advance on Stanley. The 1st Battalion 7th Duke of Edinburgh's Own Gurkha Rifles and the rest of 2 PARA advanced by sea and by air while the 2nd Battalion Scots Guards, the 1st Battalion Welsh Guards and logistic support units were transported to Fitzroy by sea. The loss of Chinook helicopters on the *Atlantic Conveyor* had effectively precluded the option of air-lifting the bulk of 5 Bde. Passage by sea was therefore the only way to move forward quickly, maintaining the impetus of the advance and minimising the risk of Argentine counter-attack. On the nights 5/6 and 6/7 June the Scots Guards and elements of the Welsh Guards were successfully moved by HMS *Intrepid* and HMS *Fearless*.



units and the remaining Welsh Guards. On 8 June the cloud lifted and, before the final elements had been disembarked from the landing ships, RFA *Sir Galahad* and RFA *Sir Triton* were hit by an air strike at Fitzroy. Both ships were abandoned. The *Sir Galahad*, which had a large number of men on board, was burnt out. 50 men lost their lives, of whom 32 were from the 1st Battalion Welsh Guards. The courageous efforts of the helicopter pilots and rescue boat crews, who took their craft again and again into the flames and blinding smoke rising from the stricken vessel, prevented greater loss of life. But for the bravery of the seamen and the dedication of all those who assisted ashore the loss of life would have been much greater. Later that day a pair of patrolling Sea Harriers destroyed four Mirages over Choiseul Sound.

Advance on Port Stanley

125. Despite previous set-backs through loss of men and equipment, particularly helicopters, the first phase of the main battle for Port Stanley began on 11/12 June when 3 Cdo Bde mounted a three battalion night attack. Simultaneously targets further to the east were bombarded by Naval vessels. As a result of vigorous and aggressive patrolling the troops were able to achieve initial surprise, and after a night of stiff fighting 3 PARA took Mount Longdon, 45 Cdo captured Two Sisters, and 42 Cdo captured Mount Harriet. British casualties were 22 killed and 44 wounded. Throughout the following day, all these positions came under considerable enemy artillery fire, causing more casualties. The shelling was not, however, all one way: the Argentine defences were heavily bombarded by our own artillery and at night by Naval guns.

126. During the night of 11/12 June HMS *Glamorgan* was withdrawing from a bombardment of shore positions around Port Stanley when she was hit by a shore-launched Exocet missile. Her company extinguished severe fires and the ship continued to be available for action. 13 men died. It was the last direct attack on a British ship in the Campaign.

127. The second phase took place on the night of 13/14 June. In the north, in another superbly executed night attack, 2 PARA captured Wireless Ridge. Further south the Scots Guards had a hard fight to capture Tumbledown Mountain from a regular Argentine Marine battalion whose heavily defended machine gun emplacements put up fierce resistance for a number of hours. The Scots Guards secured their objectives and the Gurkhas moved through to take Mount William to the south-east. In this final phase we lost 20 men.

128. Large numbers of the enemy abandoned their positions, discarded their weapons and stood around disconsolately. British troops followed up to the edge of Port Stanley where they were ordered to halt and fire only in self defence, to avoid fighting in the town and among the civilian population. Soon afterwards white flags were reported over Stanley and General Moore accepted the Argentine surrender.

Chronology

- 2 April Argentina invades the Falkland Islands.
- 3 April Argentina invades South Georgia; UN passes Security Council Resolution 502; first RAF transport aircraft deploy to Ascension Island.
- 5 April First task force ships sail from the United Kingdom.
- 12 April 200 mile maritime exclusion zone comes into effect.
- 23 April The Government warns Argentina that any approach by Argentine warships or military aircraft which could amount to a threat to the task force would be dealt with appropriately.
- 25 April British Forces recapture South Georgia; submarine *Santa Fé* attacked and disabled.
- 30 April Total exclusion zone comes into effect.
- 1 May First attack on Falklands by Vulcan, Sea Harriers and warships; first Argentine aircraft shot down.
- 2 May *General Belgrano* sunk by HMS *Conqueror*.
- 4 May HMS *Sheffield* hit by Exocet missile; later sinks.
- 7 May The Government warns Argentina that any Argentine warships and military aircraft over 12 miles from the Argentine coast would be regarded as hostile and liable to be dealt with accordingly.
- 9 May Two Sea Harriers sink trawler, *Narwal*, which had been shadowing task force.
- 11 May HMS *Alacrity* sinks store ship *Cabo de los Estados* in Falkland Sound.
- 14 15 May Special Forces night raid on Pebble Island; 11 Argentine aircraft destroyed on the ground.
- 21 May 3 Cdo Bde establish beach-head at San Carlos; HMS *Ardent* lost; some 15 Argentine aircraft destroyed.

- 23 May HMS *Antelope* crippled (sinks 24 May);
10 Argentine aircraft destroyed.
- 24 May 18 Argentine aircraft destroyed; some damage to
ships.
- 25 May HMS *Coventry* lost and *Atlantic Conveyor* hit by Exocet
(sinks 28 May); 8 Argentine aircraft destroyed.
- 28 May 2 PARA recapture Darwin and Goose Green.
- 30 May 45 Cdo secure Douglas settlement; 3 PARA recapture
Teal Inlet; 42 Cdo advance on Mount Kent and
Mount Challenger.
- 1 June 5 Bde land at San Carlos.
- 8 June RFAs *Sir Galahad* and *Sir Tristram* hit at Fitzroy;
10 Argentine aircraft destroyed.
- 11, 12 June Mount Harriet, Two Sisters and Mount Longdon
secured; HMS *Glamorgan* hit by shore-based Exocet —
damaged but seaworthy.
- 13, 14 June Tumbledown Mountain, Wireless Ridge and Mount
William secured; General *Menendez* surrenders.
- 20 June South Thule secured.
- 25 June Mr Hunt, Civil Commissioner, returns to Port Stanley.

The Lessons

Introduction

201. The Falklands Campaign was in many respects unique. We must be cautious, therefore, in deciding which lessons of the Campaign are relevant to the United Kingdom's main defence priority—our rôle within NATO against the threat from the Soviet Union and her allies. The basic ingredients for success were present from the outset: a firm resolve; flexibility of forces, equipments and tactics; human ingenuity; and well trained officers and men.

202. From the outset the Government were heartened by the understanding and support of the United Kingdom's partners in the European Community, our Allies in NATO and, not least, our friends in the Commonwealth. This international support, which in many cases represented a clear choice of principle over material interest by the Governments concerned, was of value in bringing home to the Argentine leaders the extent of their international isolation. It also extended in some instances to the provision of material help which was of direct benefit to the task force.

203. The Campaign provided the Royal Navy's first experience of battle in the missile age. At San Carlos British forces undertook the first large-scale amphibious operation for many years. And in the land battles for Port Stanley they experienced an infantry battle at brigade strength and in extreme weather conditions. Our analysis of the Campaign is continuing: some new lessons have been learned; many more old lessons have been reinforced. The following sections describe the principal lessons and the steps we are taking to apply them.

Crisis Management and Command and Control

204. The higher management of the crisis was conducted by a small group of Ministers which was chaired by the Prime Minister and met almost daily. The Attorney General attended meetings when legal advice was required. Those in attendance always included the Chief of the Defence Staff, as the Government's principal military adviser. This group of Ministers ensured that the diplomatic, economic and military strands of our policy were properly coordinated. On the military side it established clear guidelines within which commanders were to conduct the operations, without making any attempt to direct the battle from 8,000 miles away. This short and clear chain of command made possible quick reaction to events and to the needs of the forces in the South Atlantic.

205. Effective political control and higher command of the operation required good communications between the United Kingdom and the task force. The vital importance was shown of satellite communications in operations conducted at great distance. There were times during the Falklands Campaign when the

ational messages but it did affect some other traffic. We currently plan to acquire a new British military satellite and to provide a terminal in all major surface warships, which will be a significant improvement. As the task force sailed south it became increasingly important to receive frequent detailed situation reports from the area of operations, both as general background for decision makers in Whitehall and as the essential basis for early and accurate announcements to Parliament and the media on events in the South Atlantic. Hard pressed local commanders were not always able to provide these and for the future we are considering how they might be enabled to do so. It will not, of course, be the intention to impose any detailed direction of actions in the field, which must remain the responsibility of the commander on the spot.

206. We have studied the management of the crisis carefully. In particular we have looked at the effectiveness of inter-Departmental coordination and the liaison between the Ministry of Defence and operational headquarters, which in this case was the headquarters of the Commander-in-Chief Fleet. In every important respect the Government and military machines worked extremely well during the crisis.

Men

207. The most important factor in the success of the task force was the skill, stamina and resolution displayed by individual Servicemen. The value of professional, volunteer, highly trained and carefully selected Armed Forces was amply demonstrated. The specialised training of a substantial proportion of the landing force—such as the Commandos—was a particularly significant asset. The quality of British Servicemen was exemplified by the defence of the landing at San Carlos; by the determined assault on heavily defended enemy positions at Goose Green; by the remarkable series of night attacks before the fall of Port Stanley; and by the outstanding performance of the Harrier and helicopter pilots.

208. The manner in which the task force responded to the many challenges and difficulties it encountered totally vindicated the priority we attach to training at all levels, from the teaching of individual skills to large-scale exercises. The Campaign highlighted the importance of both physical and mental toughness. To achieve and maintain this we need to keep readiness and training at as high a level as possible.

Maritime Operations

209. The operations of the task force at sea were guided by three established principles of maritime warfare: containment of enemy forces, defence in depth and keeping the initiative. The course of the Campaign emphasised the relevance of these principles and the importance of a balanced fleet, the RFA's ability to replenish RN ships at sea and the support of ships from the Merchant Navy. The key questions of warship performance and maritime air defence are discussed in paragraphs 218–221 and 225–230.

extensive training in amphibious operations proved vital. The landings at San Carlos clearly demonstrated the ability of HMS *Fearless* and HMS *Intrepid* to launch and support amphibious operations and the value of suitably adapted merchant ships to supplement the logistic landing ships. 3 Cdo Bde, reinforced by 2 PARA, 3 PARA and other elements proved ideally suited for the task. The helicopters deployed with the landing force played an invaluable part. The weather, terrain and the likely requirement to land away from established ports were similar to the conditions British forces would face in Norway, on NATO's northern flank. The success of the Falklands Campaign bore out our confidence, and that of our Allies, in the ability of British amphibious forces to react swiftly and effectively to emergencies in and away from the NATO area.

Nuclear-powered submarines

211. Our nuclear-powered submarines (SSN) played a crucial rôle. After the sinking of the *General Belgrano* the Argentine surface fleet effectively took no further part in the Campaign. The SSNs were flexible and powerful instruments throughout the crisis, posing a ubiquitous threat which the Argentines could neither measure nor oppose. Their speed and independence of support meant that they were the first assets to arrive in the South Atlantic, enabling us to declare the maritime exclusion zone early. They also provided valuable intelligence to our forces in the total exclusion zone.

- Land Operations

212. The most decisive factors in the land war were the high state of individual training and fitness of the land forces, together with the leadership and initiative displayed especially by junior officers and NCOs. The Campaign underlined the importance of night operations and aggressive patrolling, which were particularly decisive during the determined series of attacks around Port Stanley, where assaults were conducted against a prepared enemy with clear fields of fire. A number of lessons will be reflected in training priorities and equipment plans. The present types of weapons proved effective but the infantry need to be supported by greater direct and indirect firepower in attack. Milan and 66 mm anti-tank weapons proved highly successful against prepared enemy positions, but there is also a requirement for an area attack weapon such as a grenade launcher.

213. The infantry would not have been able to carry their objectives without the support they received from artillery and Naval bombardment. The ability of the 105 mm light guns to bring down instant and accurate fire at night or through smoke and fog contributed significantly to the final collapse of Argentine morale. The importance was underlined of all ranks being trained and able to call for fire.

Special Forces

214. The SAS and the SBS played a key rôle in the Campaign. They operated in advance of the main land forces to gather essential intelligence, and also

This tactic was notably successful in assisting the landing force to come ashore virtually unopposed at San Carlos. Later, they moved ahead of the main force to reconnoitre the high ground around Mount Kent, from which the final assault was launched on the Argentine positions in front of Port Stanley.

215. In the most demanding circumstances the Special Forces were thoroughly tested in the skills and tactics which they would employ in any future war in the NATO area. Their response has justified our confidence that existing selection and training methods produce Special Forces which are well prepared for the calls that might be made on them in general war. The combination in a single patrol of intelligence-gathering skills and the capacity to mount highly destructive raids gives military commanders a flexible and potent weapon. Experience in the Falklands confirmed this, as well as providing useful lessons for the future, particularly about improvements in equipment.

Equipment

216. Weapons systems depend for their effectiveness not only on their inherent quality but also on the thorough and realistic training of their operators, and on first class maintenance, spares and servicing. The Armed Forces are organised and equipped primarily for operations in the NATO area against the Warsaw Pact. In the South Atlantic they faced a different challenge. Particularly aircraft, but also other equipments, were constantly in demand to perform unfamiliar tasks which were important to the operation. The effects of a long sea passage and damp on land-based missiles, electronics and other equipments had to be overcome. On the other hand, some conditions were easier than they would be in NATO operations; for example, the virtual absence of electronic counter-measures (ECM) in the Argentine inventory.

217. Nevertheless, the Campaign provided a unique opportunity to test our equipment in combat. Experts have assessed the performance of individual equipments and their support arrangements. Generally the equipment and weapons systems performed well in especially demanding circumstances: as well as, and sometimes better than, expected. The operational availability of equipment was impressive. In most cases the need was confirmed for improvements already planned. We discuss in the remainder of this section the performance of the main weapons platforms and the contribution of equipment in the rôles in which it was deployed.

Warships

218. Operations in support of an amphibious landing within range of enemy aircraft and without the assistance of airborne early warning (AEW) aircraft or land-based all-weather fighters inevitably risked ship losses. In addition to the four warships, one RFA and one merchant ship were lost: eight other warships and two RFAs suffered varying degrees of damage.¹ In most cases these ships continued to take part in operations, making good damage through the efforts of their crews aided by specialist teams. The carriers, HMS *Hermes*

Note:

¹ Details of ship and aircraft losses are given in Annex C.

good platforms for air operations. For example, on 1 May HMS *Hermes* tasked 12 Sea Harriers in attacks on Port Stanley and Goose Green, yet one hour after their return home the same aircraft were airborne for air defence patrols.

219. In our assessment of the lessons to be drawn for warship design we have had the benefit of a valuable independent review conducted by members of the Marine Technology Board of the Defence Scientific Advisory Council. It is clear that RN ships are strong and reliable platforms able to operate continuously at sea even in the most difficult weather conditions. No fundamental design defects have been identified.

220. There has been comment on the use of aluminium in the construction of ships. The facts are that aluminium was used in the superstructure of the Type 21 class of frigate and to a small extent in a few other classes, but not in the Type 42 destroyers, such as HMS *Sheffield*. In addition, aluminium is sometimes used for non-structural minor bulkheads, ladders and ventilation trunking. By use of aluminium it is possible to make significant savings in the weight of ships above the water-line, but it has been recognised that this metal loses strength in fires and therefore its extensive use in the construction of RN warships was discontinued several years ago. Nonetheless, there is no evidence that it has contributed to the loss of any vessel.

221. Some important lessons have been learned about the rapid spread of fire and smoke in ships, and about the use of materials which can prove hazardous in fires. Cabling fitted in older ships can prove inflammable; this hazard will be greatly reduced in new ships. Urgent studies are now in hand aimed at improving the survivability of existing ships and incorporating lessons in future designs. Examples of measures which will be taken include improved fire zones; changes to the design of watertight doors and hatches; the provision of more escape hatches; making bulkheads more smoke-tight; the re-siting of fuel tanks; reductions in inflammable materials; and additional fire pumps, breathing apparatus and personal breathing sets.

Aircraft

222. *Harrier*. 28 Sea Harriers and 14 RAF Harrier GR3s were eventually deployed to the South Atlantic. Over 1,100 combat air patrol missions and 90 offensive support operations were flown by Sea Harriers and 125 ground attack and tactical reconnaissance sorties by Harrier GR3s. These aircraft were a major success, showing themselves to be flexible, robust, reliable and effective. Sea Harriers, which are intended largely for air defence, were also employed in the ground attack and reconnaissance rôles: the Harrier GR3s, primarily ground attack aircraft, were converted within a week to use Sidewinder AIM 9L air-to-air missiles in the air defence rôle. There was 95% availability at the beginning of each day and 99% of all planned missions were flown. Sea Harrier demonstrated itself to be more than a match for Argentine conventional fixed wing aircraft with 20 confirmed and 3 probable kills, of which 16 and 1 respectively are attributable to Sidewinder AIM 9L missiles. Six Sea Harriers were destroyed, of which two were lost to enemy fire—one to small-arms fire and one to a Roland surface-to-air missile. Three GR3s were also lost to enemy fire, all to ground gunfire. Most aircraft engaged in offensive

aircraft gunfire. The need was for greater endurance and weapon carrying capacity and a better radar. As a result, Sea Harriers, starting with those already deployed in HMS *Illustrious*, are being given greater endurance by the fit of larger drop tanks, and increased armament by the fit of four rather than two Sidewinder missiles. Improvements to the Sea Harrier's radar and radar warning receiver systems are planned.

223. *Nimrod*. The Nimrod maritime patrol aircraft was given a simple, effective air-to-air refuelling capability and 16 aircraft have been modified in this way. This, with the addition of vision aids, improved navigation equipment, and a variety of weapons including Harpoon, Stingray and Sidewinder, has greatly enhanced its overall capability. A total of 34 Nimrods will eventually be modified to enable them to carry anti-shiping and air-to-air missiles. The Nimrods' Searchwater radar performed well, enabling crews to monitor shipping at long range, outside missile engagement zones of possible enemy warships. The full capability of this radar is still being developed and exploited.

224. *Helicopters*. Almost 200 helicopters of seven different types (Sea King, Wessex, Lynx, Gazelle, Wasp, Scout and Chinook) were deployed. After the loss of three Chinooks and six Wessex in the *Atlantic Conveyor*, there was a shortage of helicopters to support the ground forces even though a squadron of Sea King anti-submarine warfare (ASW) helicopters had been converted to the support rôle. A graphic illustration of the Chinook's capability was supplied by the single aircraft to survive the sinking of the *Atlantic Conveyor*; without spares and ground support it flew 109 hours in combat conditions, carrying up to 80 armed troops in a single lift. In addition helicopters were also heavily committed in the ASW or anti-surface vessel warfare (ASVW) rôle, logistics, search and rescue, casualty evacuation and reconnaissance or support rôles. Naval helicopters operated at over three times peacetime rates. Lynx performed well and the Sea King Mk 4 with its large internal and external load-carrying capability was particularly useful. Of the Army helicopters, Gazelle is designed to be used predominantly as a reconnaissance and command-and-communications helicopter. Without offensive armament and in a country devoid of natural cover it proved vulnerable to ground fire and we are currently assessing ways of enhancing its battlefield survivability.

Air Defence

225. The battle for air superiority was vital to the success of the Campaign. In NATO operations in the Eastern Atlantic the Royal Navy would be supported by land-based aircraft and, when available, the carrier strength of the United States Navy. In the South Atlantic, the task force was faced with an efficient land-based air force of over 200 frontline aircraft, and its greatest handicaps were the shortage of fighter aircraft and the lack of AEW. Sea Harriers were outnumbered six to one. AEW aircraft could not be deployed at all. The task force relied on a mix of systems for air defence. These comprised electronic detection systems, fighter aircraft, ECM, medium and short-range missiles,

them destroyed a confirmed total of 72 enemy aircraft and a further 14 probables. By the time of the final assault on Port Stanley the Argentine air force had been effectively neutralised as a fighting force. Our assessments of Argentine air losses and of the performance of individual missile systems are shown at Annex B.

226. The value of the medium-range air defence missile, Sea Dart, was evident in the eight kills it achieved. The known capability of the system also deterred many attacks and forced the Argentine aircraft to fly at low altitude, which made them easier targets for other systems and often prevented their bombs from fuzing. There are areas in which the Sea Dart can be improved and these are either in hand or being studied.

227. Although designed primarily as a self-defence weapon against missiles, the capable Sea Wolf point defence system was used against low-level attacking aircraft. In this rôle it shot down five Argentine aircraft. No opportunity arose to use Sea Wolf against missiles. The flexibility of this system was shown by the speed with which its software was adapted to cope with low-level aircraft attacks. A package of improvements for Sea Wolf is already in hand.

228. As acknowledged above, the absence of AEW was a severe handicap against Argentine air attacks mounted at very low level, especially at San Carlos where the radars deployed suffered considerable interference from surrounding high land. The lack of AEW also proved an important limitation in the task force's ability to deal with the threat from Exocet by intercepting the aircraft carrying it before the missile could be launched. The difficulty of guaranteeing detection of low-flying aircraft made it prudent for the carriers to operate well to the east of the Falklands, which limited the patrol time of Sea Harriers. This shortcoming has now been remedied in part by the deployment in HMS *Illustrious* of two Sea King helicopters equipped with modified Searchwater radars, which taken with the deployment of Sea Harriers with greater endurance represents a major improvement in our carrier-borne air defence capability. Further steps to improve the AEW capability of the Fleet are discussed in Part 3. In addition the Nimrod AEW Mk 3 will be deployed in the Eastern Atlantic from 1984, following initial delivery towards the end of 1983. In the Falklands we now have new radars and RAF Phantoms which, when on combat air patrol, can provide some early warning of low-level air attack.

229. The threat posed by the sea-skimming missile, Exocet, was well understood before the operation: and counter-measures to deal with it were available to the task force. Additional electronic and other measures were very quickly devised and deployed to the South Atlantic. For example, chaff was extensively and successfully used. For the future the improved Sea Wolf system already ordered will have an all-weather capability against low-level missiles, and several programmes are in hand to improve our ship-borne ECM capability. The provision of AEW will also enhance the ability of RN warships to deal with this threat.

air defence field include:—

- a. The need for a point defence weapon system for high value units. As an interim measure the American Vulcan-Phalanx gun system has been mounted on HMS *Illustrious* and HMS *Invincible* and low-level air defence guns have been fitted to a number of other ships. Our plans for the future are described in paragraph 311f.
- b. The need for more realistic training. In particular all ships need to be fitted with a wide range of on-board trainers if the Royal Navy is to optimise the performance of its high technology systems. There is also the need for more realistic targets for the peacetime training of air defence weapon system operators.
- c. Ship-borne surveillance radars and command and weapon control systems. Various improvements are being urgently examined.

231. As to land-based air defence, Rapier performed well and had a major part on the Campaign. It was employed only in the optical mode to provide land-based low-level air defence after the landings on 21 May. The conditions for the operation of Rapier were severe. The system had been exposed to the rigours of a long sea voyage and was without its second-line support. Enemy air attacks were generally prosecuted at below 100 feet, often in valleys shrouded by mist and in poor light. Nevertheless, it scored 14 confirmed and 6 probable kills. A series of improvements to the system's reliability and speed of reaction has already been developed and is being incorporated in Rapiers in the United Kingdom and Germany. We have also planned for some time to introduce later in the decade a further series of improvements to the missile, fuze, the radars and the capability of the system against multiple targets.

232. Blowpipe is a point defence missile system designed to be operated, and carried limited distances, by one man. In this campaign it was used extensively against fast-crossing targets for which it was not designed, and subjected to far rougher handling than it had been designed to withstand. Despite this it brought down nine enemy aircraft and a further two probables. Experience in the Campaign has confirmed the need for the series of improvements already in hand, which include enhancements to the missile warhead and motor and introduction of an improved aiming unit and an alerting device. These improvements should be completed in stages over the next six years.

Anti-Surface Vessel Warfare

233. The strategic dominance of the SSN and its crucial part in the Campaign have already been described in paragraph 211. Apart from the sinking of the cruiser, *General Belgrano*, surface action was confined to engagements against patrol craft and small merchant vessels. The helicopter mounted air-to-surface guided weapon, Sea Skua, was deployed for the first time and performed excellently. It scored eight hits with eight firings, destroyed one patrol craft and seriously damaged two other Argentine ships. The 4.5" gun also proved to be accurate and effective in the anti-surface ship rôle.

Anti-Submarine Warfare

234. In the face of the threat from Argentine submarines, task force ships and aircraft carried out extensive anti-submarine operations. The ability to sustain

conducting ASW in shallow water. We have a long way to go to improve our ASW capability and will be examining what other measures are now required.

Land Warfare

235. In general the land forces found most of their equipment well able to withstand the rugged treatment it received on the Falklands. Of special interest were:—

- a. *Mobility.* The ground forces were heavily dependent on helicopters and tracked vehicles for mobility. The tracked combat reconnaissance vehicles, Scorpion and Scimitar, performed very well in boggy conditions, covering an average of 350 miles each. One vehicle withstood a shell which landed 1½ metres away; another ran over a mine which severely damaged the vehicle but left the crew unharmed. The Combat Engineer Tractor was also an essential and effective vehicle on this demanding terrain. The extensive use of mines by the Argentine army was a notable problem. An assessment of the Army's ability to breach minefields rapidly had been set in hand before the Campaign.
- b. *Artillery and Naval Gunfire Support.* The main land-based artillery support for the ground forces was provided by the 105mm light gun, which together with its ammunition was deployed mainly by helicopter. Its performance was excellent. The five batteries engaged fired nearly 17,500 rounds. Some guns fired as many as 500 rounds in 24 hours. Task force ships fired 8,000 rounds of ammunition in accurate Naval gunfire support attacks on ground targets.
- c. *Anti-Armour and Personal Weapons.* The self-loading rifles and general purpose machine guns proved effective small arms, notwithstanding that the weight of weapons and ammunition presented physical and logistic problems on such unfavourable terrain. These problems will be eased considerably by the new small arms which should enter service in the mid-1980s. The 81mm mortar proved versatile and effective. Although not used in their primary rôle, anti-armour weapons such as Milan were very effective against strong defensive positions.
- d. *Night Fighting.* A requirement was demonstrated for more night fighting equipment. Since the conflict we have placed orders for the procurement of general purpose night-vision goggles for the infantry and night-flying goggles for the Army Air Corps. Further purchases of both types are planned.
- e. *Combat Clothing.* In the exceptionally demanding conditions of the Falkland Islands winter a number of shortcomings were identified in clothing and personal equipment. Replacement of some of these items has already commenced.

Air-to-Ground Warfare

236. Although there was only limited opportunity to observe the effectiveness of our own land-based air power in combat conditions, several lessons emerged—both from our own operations and those of the Argentines—which are

- a. *Attack on Airfields.* In the longest range bombing missions yet flown Vulcan bombers attacked Port Stanley airfield, but with only 1000 lb bombs they were unable to close the runway for more than a short period. The need was underlined for an advanced airfield attack weapon such as JP 233.
- b. *Defence Suppression.* Although combat aircraft were quickly fitted with chaff and flare dispensers and some active ECM equipment, which proved vital in the event, the lack of defence suppression weapons to attack enemy radars exposed the Harriers to heavy and accurate ground-fire. Vulcan attacks were made on radars close to Port Stanley using Shrike anti-radiation missiles, with some success; the procurement of anti-radiation missiles is included in our forward plans.
- c. *Close Air Support.* The Campaign exposed the limitations of the traditional method of forward air control of close air support operations. In the later stages laser target marking from the ground was used, enabling laser-guided bombs to make direct hits on their targets. For the future, tactical ground-air communications will be improved, and the effectiveness of laser target marking will be further explored.
- d. *Air Reconnaissance.* The absence of a dedicated overland air reconnaissance capability was a handicap in the Campaign, and the resulting lack of precise information on enemy dispositions presented an additional hazard to ground forces. We plan to improve our tactical reconnaissance capability.
- e. *Sea-Skimming Missiles.* The Campaign showed the potential of air-launched, sea-skimming missiles. We have already equipped a number of Nimrod aircraft with the Harpoon anti-ship missile and we will further improve our existing capability in this area by the early acquisition of the advanced Sea Eagle missile, which has a longer range and more discriminating capability than Exocet.

longo/obteniciones

P^{ro}urement and Improvisation

237. In the exceptional circumstances of the Campaign our procurement ^{esses} proved adaptable to meet the wide variety of military needs against very tight timescales. New operational demands were satisfied in record times through the ready availability of a broad spectrum of scientific and engineering expertise in the Ministry of Defence research establishments and the comprehensive resources of the United Kingdom's defence industry. The Campaign demonstrated the value of a broadly based national defence industry, and the benefits of an in-house research capability.

238. Those concerned at all levels in both Government and Industry worked hard to enhance our operational capabilities by specific threat assessment and computer modelling work; material and software modifications to equipment; rapid development of new equipment capabilities; and accelerated introduction of equipments into service. Examples included the development of important, often vital, equipments by combining existing items in new ways, such as the

helicopters in only 11 weeks); the invention, production, proving and delivery in record time of many new equipments, including man-portable radar jammers (10 days from order to delivery); the accelerated introduction into service of HMS *Illustrious*, HMS *Brazen* and weapons such as the Sea Skua anti-ship missile; and the adaptation of Vulcan, Hercules and Nimrod aircraft for air-to-air refuelling.

239. The urgency of the requirement frequently warranted the acceptance of lower engineering and safety standards; emergency arrangements worked well for the limited period of the operation. Overriding priority was given to the operation at all times and decisions were determined by what could be achieved in the time available.

240. The experience of the Campaign is being put to full use in the continuing quest for greater efficiency in the procurement process. It would be unrealistic to expect sweeping changes since the bulk of the emergency practices used were special to the operation and because equipment requirements were narrowed to the immediate task of countering specifically known Argentine capabilities. Budgetary and cash limit restraints were removed although the principles of accountability and cost-effectiveness continued to apply.

Logistics and Personnel

241. A military operation of this scale required the specialised skills of many thousands of managers, engineers and technicians. They performed a multitude of rôles, particularly in the logistics field, which were essential to the success of the operation but which did not require detailed direction. As was to be expected they responded well to the need for speed of action in following well-established procedures and for improvisation whenever this was likely to assist the operational commander.

242. The logistic support of the Falklands Campaign was a major success. Despite lines of communication which stretched half way round the world, the task force rarely lacked essential supplies, and equipment and spares were maintained at high levels of availability. The task force was equipped and despatched in a remarkably short time, reflecting the high state of readiness and training of all three Services. Four lessons stand out.

243. First rates of usage, particularly of ammunition, missiles, and anti-submarine weapons were higher than anticipated. Last year we announced plans to increase substantially war reserve stocks in order to improve staying power; scalings will be reviewed in the light of experience in the Falklands Campaign.

244. Second we need to consider the level of logistic support maintained for 'out of area' operations. Since the late 1960s there has been a steady reduction in the Services' capability to support large forces outside the NATO area. All the demands of the task force were met, but only by giving it first call on resources and by using some stocks earmarked for NATO operations. The Services' logistic capability to support 'out of area' operations has to be

position of the special unit, being created to support out of area operations. We shall also consider whether logistic support could be organised as part of a flexible system able to support forces whether inside or outside the NATO area.

245. Third, *air-to-air refuelling* is vital in supporting operations at long range. For example, RAF Harriers flew non-stop to the South Atlantic from Ascension Island with tanker support. In the operations from Ascension Island, the relatively small amount of fuel carried by the Victor tanker aircraft resulted in a large proportion of the available tanker force being used for each Vulcan, Nimrod and Hercules sortie. Large capacity strategic tanker aircraft are needed to provide greater operational flexibility in the future and our proposal for this is discussed in paragraph 311a.

246. Finally the Campaign brought home the significant contribution which *civil resources can make to the nation's strength in a crisis*. This was discussed in the Statement on the Defence Estimates for 1982 (Cmd 8529). Our intention to review the use of national logistic and manpower resources in this way has now been given even greater impetus. The smooth and rapid implementation of existing contingency plans to use merchant shipping in support of the Services was a major success story of the Campaign. Some 45 ships were taken up from trade, from passenger liners to trawlers. They provided vital support across the entire logistic spectrum. Tankers carried fuel for ships, aircraft and land forces. Liners, such as the *QE2* and *Canberra*, and ferries gave service as troop carriers. Cargo ships, such as the *Atlantic Conveyor*, carried helicopters, Harriers, heavy equipment and stores. Other vessels were taken up as hospital ships, repair ships or tugs. All these ships were manned by volunteer, civilian crews, supplemented by small Naval or RFA parties.

247. Amongst the more notable conversions made to merchantmen were:-

- a. The fitting of flight decks, which were designed and constructed in a matter of days and subsequently stood up to extremes of weather. Whilst no substitute for operational flight decks, these temporary facilities were invaluable.
- b. The provision and fitting of equipment to all merchant ships to enable them to replenish at sea.
- c. The equipping of trawlers as minesweepers, which swept some ten enemy buoyant mines.
- d. The provision of additional communication, navigation and cryptographic equipment.
- e. The provision of shipboard water production plants.

248. Civil air carriers supplemented the efforts of the RAF Air Transport Force and between April and June transported more than 350 tons of freight, including helicopters, to Ascension Island.

249. The Dockyards, civilian ports, stores depots, marine services and staff in Government Departments, together with hundreds of industrial firms large

Public holidays. British Rail and the road haulage firms reacted rapidly to move vast quantities of stores and equipment to the docks.

250. As a consequence of the Campaign we have decided that militarily useful features should be incorporated in the replacement for *Atlantic Conveyor*, involving principally a prefabricated helicopter flight deck. We also have an option to take up the ship for a period each year for exercises. For the longer term a working party of the Shipping Defence Advisory Committee will examine ways in which merchant ships likely to be required in any future emergency might be designed, modified or equipped for possible use in support of the Armed Forces or for self-defence.

251. The *manpower* demands of the campaign were met almost entirely by our regular forces, and there was no general recall of reservists. It was, however, necessary to effect a selective call-out of a small number of Naval reservists and to retain some Naval personnel who might otherwise have been due to leave. The call-out worked smoothly but the exercise indicated the need to examine the legislation on the recall of reservists. As we pointed out in Cmnd 8529 the various categories of Reserves would play an essential part in any future war in the NATO area. Some enhancements to our capabilities have already been made, for example by the expansion of the Territorial Army, and other steps are being studied.

252. The outstanding feature of the *medical and casualty evacuation system* was the dedication of the doctors and medical staff both in the field and on board ship. Casualties were in surgery within six hours or less and, as a result of this and the skill of our medical teams, over 90% survived. Extensive use was made of helicopters and hospital ships. VC10s were used in an *aero-medical* rôle to return casualties speedily to the United Kingdom. There were some difficulties in the initial planning of medical support for the operation. These are being studied with a view to making the most effective and economical use of medical resources from all three Services in future operations.

253. The *casualty reporting systems* of all three Services were rapidly expanded for the operation. For example, the Royal Navy set up their own casualty coordination centre at HMS *Nelson* in Portsmouth. It collated information from the task force via Fleet Headquarters and passed it to casualty action centres in Service locations. Families were able to telephone with enquiries and at the height of the operation thousands of calls were dealt with every day. Wherever possible, next of kin were informed before news of an incident was made public. This was done by personal visits in the case of death or serious injury. In some cases the expectation that news could reach the public early from other sources, such as Argentine claims, led to an announcement before all next of kin had been told.

Note:

¹ In all 255 task force lives, Service and civilian, were lost in the operation. A further 777 were injured. In many cases these injuries were not serious and the men were quickly able to rejoin their units. Over 700 of the injured are now fully employed once more.

helicopter transfer of personnel between ships, and the fact that survivors might be recovered by different means to different ships. It could take many hours to establish who was missing while other operations continued. Given these difficulties, the system worked as well as could be expected and improved during the operation.

255. By the end of the Campaign our forces had taken a total of 11,400 Argentine *prisoners of war*. The operational situation and the climate increased the considerable difficulties in handling so many prisoners--especially given the shortage of buildings on the Islands and the loss of tentage for 4,500 men in the *Atlantic Conveyor*. Nonetheless, all prisoners received adequate food, clothing and medical attention. The procedures laid down in the Third Geneva Convention were followed as closely as possible, although many prisoners had to be accommodated in ships. The International Committee of the Red Cross judged this unusual step reasonable in the circumstances. The problems raised by handling prisoners of war will be given more emphasis in training and planning in future.

Public Relations

256. The Government's firm objective from the outset was to provide as quickly as possible accurate information on developments in the diplomatic and military fields. In addition to the frequent reports which Ministers made to Parliament, No 10 Downing Street Press Office, the Ministry of Defence and the Foreign and Commonwealth Office provided regular briefings for the British and international press and for defence attachés. Abroad, our diplomatic missions, with the help of the Central Office of Information, launched and maintained an intensive effort with their local media to present the British case fully and accurately and, where necessary, to counter Argentine disinformation. At the same time they kept other Governments informed of the latest developments, canvassing support both in foreign capitals and at the United Nations. Arrangements were also made to convey a sizeable British press corps to the South Atlantic.

257. It was crucial that public opinion, both at home and abroad, understood and supported our cause. Without the support of the British people it would not have been possible to mount and sustain the operation. It was vital to retain the support of friends and Allies abroad. That this was largely achieved is a measure of our success in providing a reliable account of the diplomatic and military developments. Of course there were problems. The need to delay or, in some cases, prevent altogether the publication of certain information on military operations caused considerable controversy at the time and continues to be the subject of widespread debate. It is easy to overlook the factors influencing the public release of certain categories of information. At all times our practice had to be consistent with the overriding dictates of national and operational security and the protection of the lives of the men and women of the task force in the South Atlantic. At the same time, we were

from family considerations would otherwise have dictated. Another factor contributing to our difficulties was the absence on some occasions of sufficiently detailed and up to date situation reports from the task force. To some extent this can be attributed to the limitations imposed by our communications systems, which did not always have the capacity to meet the requirements of the press on top of the vast flow of vitally important operational traffic.

258. These matters deserve careful and considered analysis. The Ministry of Defence has therefore commissioned a wide-ranging study by University College, Cardiff into the relationship between the media and the Government in a time of armed conflict. In addition, the House of Commons Defence Committee is currently conducting an extensive inquiry into the way in which these matters were handled during the crisis and we shall wish to take its report into account in our analysis. Meanwhile, a number of practical improvements are being made in the light of the Falklands experience, including new arrangements for accrediting journalists to military units and more extensive training opportunities for public relations officers. The Ministry of Defence is also discussing with the press the extent to which the difficulties which arose could be avoided in future. A special working party will be set up to consider whether any new measures, including the introduction of a system of censorship, are necessary in order to protect military information immediately before or during an operation.

Blank

The Future

301. We have learned a great deal from the Falklands Campaign. Many of the lessons are not new but they are no less important for that. We have seen again the value of professional, well-motivated forces capable of responding quickly and imaginatively to the unexpected. The Armed Forces have demonstrated their capability to operate out of the NATO area in the most difficult circumstances and on the other side of the world; and they have gained direct experience of such an operation and the logistic effort necessary to support it. We now intend to introduce new and additional equipments to increase their mobility, flexibility and readiness for operations within the NATO area and elsewhere.

302. This is not to say that we now take a different view of the major threat to the security of the United Kingdom, which comes from the Soviet Union and its Warsaw Pact allies. The remorseless growth in the size and sophistication of the Soviet armed forces, and the disposition of Soviet leaders to exploit their military power for political purposes—directly or indirectly—continue unabated. It is still in Europe that we and our Allies face the greatest concentration of Warsaw Pact forces. In *The Way Forward* (Cmnd 8288) we identified the four main rôles in which the Armed Forces help to counter that threat: providing an independent element of strategic and theatre nuclear forces committed to the Alliance; defending the United Kingdom homeland; a major land and air contribution on the European mainland; and deploying a major maritime capability in the Eastern Atlantic and Channel. These rôles remain the priority for our defence effort—and the enhancement and modernisation of the forces devoted to these tasks must still have the first call on our resources.

303. *The Way Forward*, however, also drew attention to the significance of threats posed to Western interests outside the NATO area. In countering these threats, our military effort plays a part at three levels:—

- a. Military assistance and training to countries of importance to Western interests which request our help. (This year we have military training teams varying in size from one man to more than 150 in some 30 countries; and in the year ending April 1982 we trained almost 4,000 students from non-NATO countries at defence establishments in this country.)
- b. Periodic deployment of British forces, for example Naval task groups, to demonstrate a presence; to acquire experience of conditions away from the European theatre; and to exercise with the forces of our Allies and friends.

either to protect our national interests or in response to a request for help from our friends.

It is this last capability which has just been demonstrated so effectively in the Falklands Campaign.

304. The policy of successive Governments has been that operations outside the NATO area should be undertaken by forces whose primary rôle is in support of the Alliance. The Falklands Campaign showed that many elements of the Armed Forces have the basic characteristics of flexibility and mobility which make them well suited to respond to unforeseen challenges arising outside Europe. We were already planning before the Falklands emergency a number of measures to enhance this capability by:

- the designation of a two-star headquarters to command forces committed to such operations;
- the establishment of a stockpile of weapons, equipment and stores which could be drawn on to support operations outside the NATO area without diverting NATO stocks; and
- the greater use of civilian assets to provide logistic and other support for the Armed Forces.

We also planned to make additions to the 5th Infantry Brigade in order to improve its 'out of area' and parachute capabilities. The combat arms units are already in being and include two parachute battalions, an infantry battalion and engineer support. To these we have just added an armoured reconnaissance regiment and in the course of next year we will add an artillery regiment, an Army Air Corps squadron and certain logistic support units. RAF Hercules transport aircraft are currently earmarked for the Brigade and the fitting of station-keeping equipment to a number of Hercules aircraft in 1985 will give the Brigade an assault parachute capability. These enhancements represent a major improvement to our capability for airborne operations 'out of area'. Taken together with the amphibious capability of the 3rd Commando Brigade

they give us a greatly improved ability to respond to the unforeseen in a flexible and rapid way. In addition, we had already announced that the two assault ships, HMS *Fearless* and *Intrepid*, were to be retained in service. These ships emphatically proved their worth in the Campaign, and will remain an important element in our amphibious capability.

305. We should like to have done more in this area but there has been little margin within the defence programme for additions of this kind in recent years.

306. The success of last year's review of the defence programme in matching resources to our revised forward plans had already won us a degree of flexibility to make adjustments to the defence programme. We have also announced that the cost of the Campaign and of replacing the ships and other equipment lost, together with the extra costs of maintaining a substantial garrison in the Falklands, are all to be found from monies additional to the 3% increase in

significant force enhancements over the next few years.

307. We have already announced that:

- following our experience in the Falklands, we intend that two carriers should be available for deployment at short notice. To ensure this a third carrier will be maintained in refit or reserve and we shall not proceed with the sale of HMS *Invincible*.
- restrictions on Armed Forces' training and activity levels have been lifted. This will help to maintain the high standards of professionalism and fitness demonstrated by all three Services during the conflict.

308. During the conflict a great variety of equipments and improvements were specially introduced for the forces involved in the operation, exceeding £200 million in value and including:—

- a. The equipping of Vulcan, Nimrod and Hercules aircraft for the air-to-air refuelling receiver rôle, and the conversion of Vulcan and Hercules aircraft to the tanker rôle.
- b. The modification of Nimrod aircraft to carry bombs, the Harpoon anti-ship missile, and Sidewinder AIM 9L air-to-air missiles.
- c. The purchase of additional Sidewinder AIM 9L missiles for Harriers and conversion of RAF Harrier GR3 aircraft to carry them.
- d. The introduction of laser-guided bombs for RAF Harrier GR3 aircraft.
- e. The adaptation of the Sea Wolf ship-borne missile system more effectively to deal with low-level aircraft attacks.
- f. The fitting of a close-in weapon system to HMS *Illustrious*.
- g. The accelerated introduction into service of the Sea Skua anti-ship missile and Sub-Harpoon submarine-launched anti-ship missiles.
- h. The further development of ship-borne chaff and electronic counter-measures to deal with sea-skimming missiles; and development of chaff and ECM for tactical aircraft and helicopters.

Most of this equipment remains available for use by the Services, whether in the South Atlantic or elsewhere.

309. The replacement of ships and other equipment lost in the Campaign will enhance the capabilities of the Services, since replacements will be newer and in many cases more capable than their predecessors; the major orders are for:—

- a. Replacement of the two Type 42 destroyers and two Type 21 frigates. Five Type 22 frigates will be ordered, of which one has already been announced and is not related to the Falklands losses. Three of these ships will be of the new Batch III design equipped with the 4.5" gun and with added point defence capability.
- b. A replacement for the logistic landing ship, RFA *Sir Galahad*. Detailed design work on the new ship is in hand and we expect to place an order during 1983. RFA *Sir Tristram* is to be brought back to the United Kingdom and we hope that it can be repaired.
- c. The replacement of all lost Harrier aircraft and Sea King, Lynx and Chinook helicopters. (See also paragraph 311 below.)

Hercules aircraft, Chinook and Sea King helicopters, Rapier air defence systems, an infantry battalion, and supporting arms. Nuclear-powered submarines, destroyers, frigates, Sea King helicopters and patrol craft, with afloat support, will be deployed in the South Atlantic; and the ice patrol ship, HMS *Endurance*, will be retained for service there. These forces can be reinforced as necessary by others already identified for this purpose and we shall periodically mount exercises to test our reinforcement capability. This will be significantly enhanced by the further improvements outlined below.

311. In the light of the conflict and in order to provide for the defence of the Falkland Islands without a major diversion of effort from the Armed Forces' primary NATO rôles, we intend—with the funds now available—to make a number of further additions and improvements to the Armed Forces. These measures will increase our total force levels, though those forces based in the Falkland Islands will be at a lower state of readiness for NATO than when in the European theatre. The main enhancements to be made are:—

- a. The purchase of wide-bodied tankers which will considerably enhance the capacity of the Royal Air Force's tanker force and will be a significant force multiplier for all the Royal Air Force's combat aircraft. Additionally, they will greatly enhance the Armed Forces' strategic mobility given their capacity also to carry large numbers of troops and heavy equipment, both for operations in Europe and elsewhere. They will transform our ability to support the Falkland Islands garrison, and to reinforce it quickly.
- b. The purchase of at least 12 Phantom F-4 J aircraft (subject to the satisfactory completion of negotiations currently in train) which will form a squadron for the air defence of the United Kingdom to replace the squadron of Phantom FGR2 aircraft committed to the South Atlantic. The deployment between theatres of this increased total Phantom force will be adjusted as and when necessary and can be quickly accomplished. For example, two Phantoms could be moved from Ascension Island to the Falkland Islands supported by a single wide-bodied tanker.
- c. The purchase of 24 additional Rapier fire units for the Army and the Royal Air Force.
- d. The purchase of five more Chinook medium-lift helicopters in addition to the three replacements already referred to. Each has the ability to lift up to 80 men and adds greatly to the mobility of our land forces; their value was clearly demonstrated by the contribution made by the single Chinook helicopter which was available in the Campaign.
- e. An increase in the previously planned number of front-line destroyers and frigates. Under these plans up to four ships would have been placed in the standby squadron by 1985. We have now decided in view of the Falklands commitment that all these destroyers and frigates should for some time yet be retained in the running Fleet. We have also taken steps to run on ships to offset the battle losses and front-line numbers will be about 55 at 1 April 1983 and 1984.

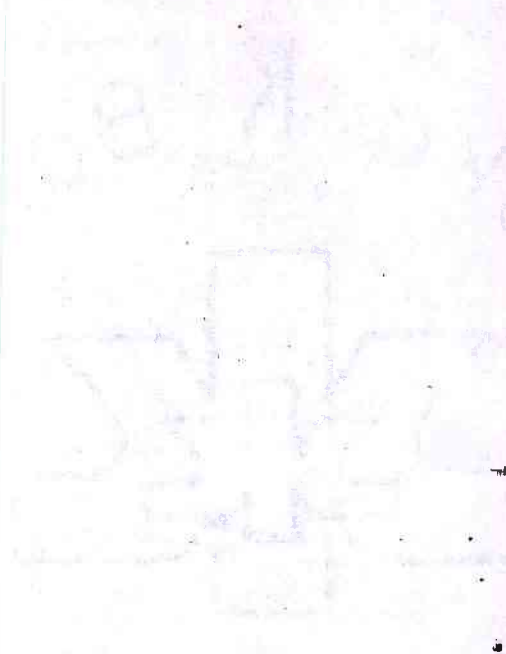
- g. In addition to replacement of all the battle losses, the purchase of seven Sea Harrier aircraft and six Sea King ASW helicopters, as announced in July.
- h. The purchase of Searchwater radar and associated avionics equipments for Sea King helicopters in order to equip each of the operational carriers with an organic AEW capability.
- i. In the light of rates of consumption during the Falklands Campaign, both of ammunition and stores, we are reviewing the size and composition of the stockpile intended to support operations outside the NATO area, and its relationship to NATO war stocks. We plan to increase substantially the number and range of items in this stockpile at a cost of at least £10 million. Additional stocks of ammunition and other equipments are being procured for basing in the Falkland Islands.

312. As indicated in Part 2 there is a case for a number of other force and equipment enhancements in the light of the Falklands Campaign. Many of these, for instance more modern radar systems for our ships, extra night vision equipment for the Army and the JP 233 airfield denial weapon for the Royal Air Force, are already provided for in our forward programmes; others are not. The scope for further improvements in our forces will be assessed against the available resources in the normal annual recosting of the defence programme as a whole, which will be completed during the early part of 1983.

Conclusion

313. The many useful lessons we have learned from the Falklands Campaign, which are described in some detail in this White Paper, do not invalidate the policy we have adopted following last year's defence programme review. The Soviet Union — its policies and its military capabilities — continues to pose the main threat to the security of the United Kingdom and our response to this threat must have the first call on our resources. Following the Falklands Campaign, we shall now be devoting substantially more resources to defence than had been previously planned. In allocating these, we shall be taking measures which will strengthen our general defence capability by increasing the flexibility, mobility and readiness of all three Services for operations in support of NATO and elsewhere.

314. Above all, the success of the Falklands Campaign demonstrated conclusively the superb quality and commitment of British Servicemen. It also showed the crucial rôle of the Merchant Navy, of civil servants on Royal Fleet Auxiliary ships, in the dockyards and elsewhere, and of British industry, all of whom gave tireless and unstinting support to the task force. The quality and reliability of much Service equipment was proved, as was the ingenuity



British industry. Finally, the Campaign confirmed that the British people and their Government have the will and resolve to resist aggression and the fortitude to withstand setbacks and casualties. We and our NATO Allies can draw confidence from this: the deterrent posture of the NATO Alliance as a whole has been strengthened.

Composition of the Task Force and Supporting Elements

1. Ships of the Royal Navy

Serial	Type/Class	No	Ship
1.	Submarines:		
	Fleet	5	<i>Conqueror, Courageous, Spartan, Splendid, Valiant</i>
	Oberon Class	1	<i>Onyx</i>
2.	ASW Carrier:	1	<i>Invincible</i>
3.	ASW Commando Carrier:	1	<i>Hermes</i>
4.	Assault Ships:	2	<i>Fearless, Intrepid</i>
5.	Guided Missile Destroyers:		
	County Class	2	<i>Antrim, Glamorgan</i>
	Type 82	1	<i>Bristol</i>
	Type 42	5	<i>Cardiff, County, Exeter, Glasgow, Sheffield</i>
6.	General Purpose Frigates:		
	Leander Class	4	<i>Andromeda, Argonaut, Minerva, Penelope</i>
	Rothsay Class	2	<i>Plymouth, Yarmouth</i>
	Type 21	7	<i>Active, Alacrity, Ambuscade, Antelope, Ardent, Arrow, Avenger</i>
	Type 22	2	<i>Brilliant, Broadsword</i>
7.	Offshore Patrol:		
	Castle Class	2	<i>Dumbarton Castle, Leeds Castle</i>
8.	Mine Counter-Measures:		
	Extra Deep Armed Team Sweep Trawlers ¹	5	<i>Cordella, Farnella, Junella, Northella, Piet</i>
9.	Ice Patrol Ship:	1	<i>Endurance</i>
10.	Survey Ships ² :	3	<i>Hecla, Herald, Hydra</i>

Notes:

¹ Taken up from trade, commissioned and manned by RN personnel.

² Employed as ambulance ships.

2. Squadrons of the Fleet

Serial	Sqdn	Aircraft	Embarked in:
1.	737	Wessex Mk 3	County Class destroyers
2.	800	Sea Harrier	<i>Hermes</i>
3.	801	Sea Harrier	<i>Invincible</i>
4.	809	Sea Harrier	<i>Hermes, Invincible</i>
5.	899	Sea Harrier	<i>Hermes, Invincible</i>
6.	815	Lynx Mk 2	<i>Invincible, Hermes</i> , Type 42 destroyers, Leander Class, Type 21 (except <i>Active</i>) and Type 22 frigates
7.	820	Sea King Mk 5	<i>Invincible</i>
8.	824	Sea King Mk 2	<i>Fort Grange, Olmeda</i>
9.	825	Sea King Mk 2	<i>Atlantic Causeway, QE2</i>
10.	826	Sea King Mk 5	<i>Hermes, Fort Austin</i>
11.	829	Wasp	<i>Active, Endurance, Plymouth, Yarmouth</i> , Survey ships, <i>Comet, Bezan</i>
12.	845	Wessex Mk 5	<i>Invincible, Fort Austin, Intrepid, Resource</i> , <i>Tidepool, Tidespring</i>
13.	846	Sea King Mk 4	<i>Hermes, Fearless, Intrepid, Canberra, Etch</i>
14.	847	Wessex Mk 5	<i>Engadine, Atlantic Causeway</i>
15.	848	Wessex Mk 5	<i>Olva, Regent, Atlantic Conveyor</i>

Serial	Type/Class	No	Ship
1.	Mooring and Salvage Vessel	1	<i>Goosander</i>
2.	Tug	1	<i>Typhoon</i>

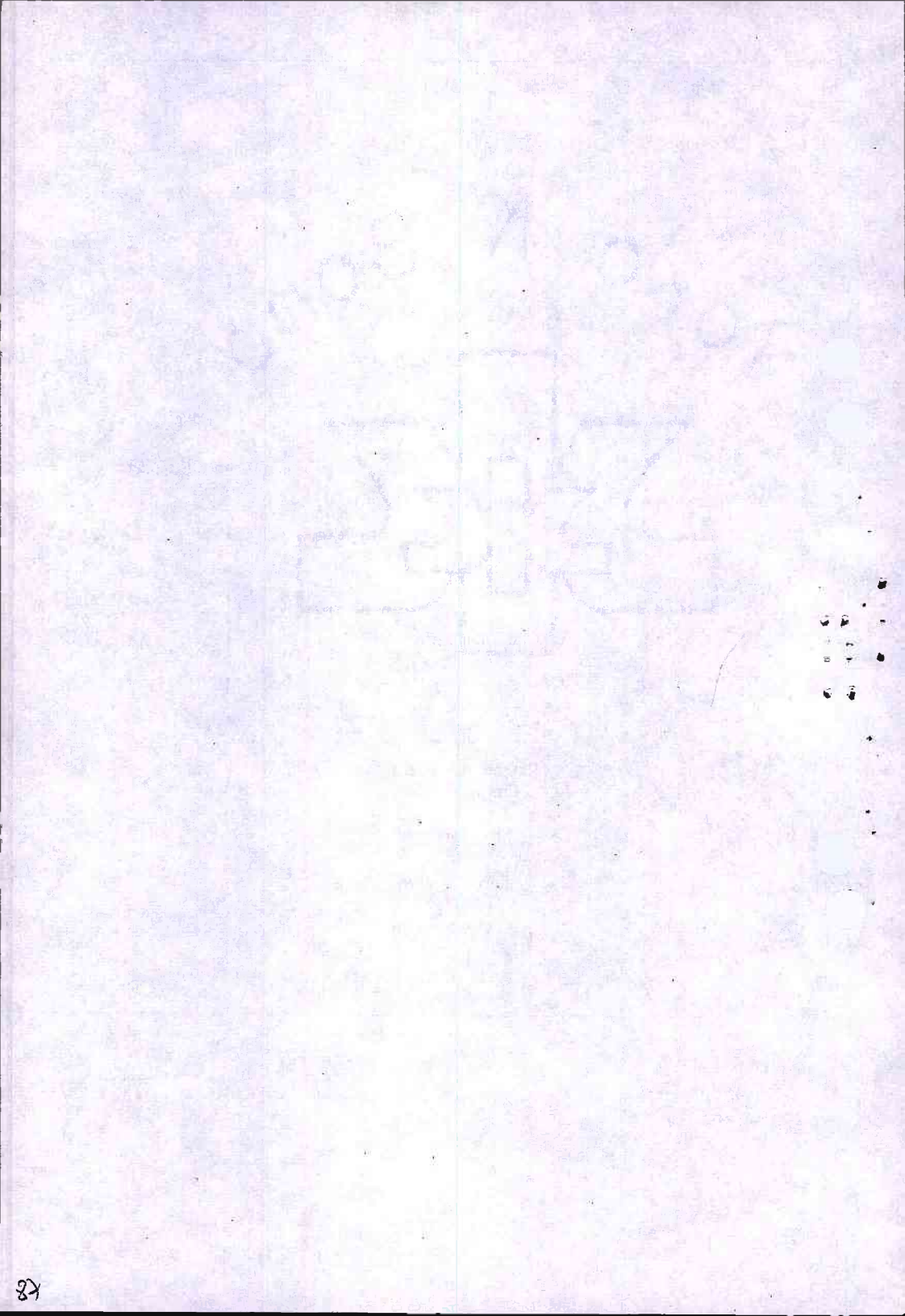
4. Ships of the Royal Fleet Auxiliary

Serial	Type/Class	No	Ship
1.	Fleet Tankers, Large:	4	<i>Olmeda, Olva, Tidepool, Tidespring</i>
2.	Fleet Tankers, Small:	1	<i>Blue Rover</i>
3.	Support Tankers:	5	<i>Appleleaf, Bayleaf, Brambleleaf, Pearleaf, Sunleaf</i>
4.	Fleet Replenishment Ships:	4	<i>Fort Austin, Fort Grange, Resource, Regent</i>
5.	Stores Support Ship:	1	<i>Stromness</i>
6.	Helicopter Support Ship:	1	<i>Engadine</i>
7.	Landing Ships, Logistic:	6	<i>Sir Bedivere, Sir Galahad, Sir Geraint, Sir Lancelot, Sir Percivale, Sir Tristram</i>

Serial	Ship	Serial	Ship	Serial	Ship
Liners		Roll-on Roll-off General Cargo		General Cargo	
1.	SS <i>Canberra</i>	19.	SS <i>Atlantic Conesway</i>	32.	MV <i>Avelona Star</i>
2.	RMS <i>Queen Elizabeth II</i>	20.	SS <i>Atlantic Conveyor</i>	33.	MV <i>Geesport</i>
3.	SS <i>Uganda</i>	21.	MV <i>Baltic Ferry</i>	34.	MV <i>Laertes</i>
Tankers		22.	MV <i>Contender Bezant</i>	35.	MV <i>Lycaon</i>
4.	MV <i>Alvega</i>	23.	MV <i>Elk</i>	36.	MV <i>Saxonia</i>
5.	MV <i>Anco Charger</i>	24.	MV <i>Europic Ferry</i>	37.	MV <i>Strathewe</i>
	MV <i>Balder London</i>	25.	MV <i>Nordic Ferry</i>	Offshore Support Vessels	
	MV <i>British Avon</i>	26.	MV <i>Tor Caledonia</i>	38.	MV <i>British Enterprise III</i>
6.	MV <i>British Dart</i>	Container Ship		39.	MV <i>Stena Inspector</i>
7.	MV <i>British Esk</i>	27.	MV <i>Astronomer</i>	40.	MV <i>Stena Seaspread</i>
8.	MV <i>British Tamar</i>	Passenger, General Cargo		41.	MV <i>Wimpey Seahorse</i>
9.	MV <i>British Tav</i>	28.	MV <i>Norland</i>	Tugs	
10.	MV <i>British Test</i>	29.	TEV <i>Rangatira</i>	42.	MT <i>Irishman</i>
11.	MV <i>British Trem</i>	30.	MV <i>Saint Edmund</i>	43.	MT <i>Salvageman</i>
12.	MV <i>British Wye</i>	31.	RMS <i>Saint Helena</i>	44.	MT <i>Yorkshireman</i>
	MV <i>Fort Toronto</i>	Cable Ships		45.	C S <i>Iris</i>
	MV <i>G A Walker</i>				
13.	MV <i>Scottish Eagle</i>				
14.	MV <i>Shell Eburna</i>				

Note:

1. In addition MVs *Cordella*, *Farnella*, *Jimella*, *Northella* and *Piet* were taken up and commissioned as mine counter-measures vessels.



Serial

1. 3 Commando Brigade Headquarters and Signal Squadron Royal Marines
 2. 40 Commando Royal Marines
 3. 42 Commando Royal Marines
 4. 45 Commando Royal Marines
 5. 3 Commando Brigade Air Squadron Royal Marines
 6. The Commando Logistic Regiment Royal Marines
 7. The Special Boat Squadron
 8. Royal Marines Detachments (including landing craft crews)
 9. Air Defence Troop Royal Marines
 10. 1st Raiding Squadron Royal Marines
 11. Mountain and Arctic Warfare Cadre Royal Marines
 12. Y Troop Royal Marines
 13. The Bands of Her Majesty's Royal Marines Commando Forces and Flag Officer 3rd Flotilla
 14. Field Records Office Royal Marines
-



Serial

1. Two troops The Blues and Royals
2. 4th Field Regiment Royal Artillery (less one battery)
3. 12th Air Defence Regiment Royal Artillery (less one battery)
4. 29th Commando Regiment Royal Artillery
5. Elements 43 Air Defence Battery, 32nd Guided Weapons Regiment Royal Artillery
6. Elements 49th Field Regiment Royal Artillery
7. Elements Royal School of Artillery Support Regiment
8. Elements 33 Engineer Regiment
9. 36 Engineer Regiment (less one squadron)
10. Elements 38 Engineer Regiment
11. 50 Independent Commando Squadron Royal Engineers
12. Elements Military Works Force
13. Elements 2 Postal and Courier Regiment Royal Engineers
14. Elements 14th Signal Regiment
15. Elements 30th Signal Regiment
16. 5th Infantry Brigade Headquarters and Signals Squadron
17. Elements 602 Signal Troop
18. 2nd Battalion Scots Guards
19. 1st Battalion Welsh Guards
20. 1st Battalion 7th Duke of Edinburgh's Own Gurkha Rifles
21. 2nd Battalion The Parachute Regiment
22. 3rd Battalion The Parachute Regiment
23. Elements 22nd Special Air Service Regiment
24. 656 Squadron Army Air Corps
25. Elements 17 Port Regiment Royal Corps of Transport

26. Elements 29 Transport and Movements Regiment Royal Corps of Transport
 27. Elements 47 Air Despatch Squadron Royal Corps of Transport
 28. 407 Troop Royal Corps of Transport
 29. Elements The Joint Helicopter Support Unit
 30. 16 Field Ambulance Royal Army Medical Corps
 31. Elements 19 Field Ambulance Royal Army Medical Corps
Elements 9 Ordnance Battalion Royal Army Ordnance Corps
81 Ordnance Company Royal Army Ordnance Corps
 34. 10 Field Workshop Royal Electrical and Mechanical Engineers
 35. Elements 70 Aircraft Workshop Royal Electrical and Mechanical Engineers
 36. Elements 160 Provost Company Royal Military Police
 37. 6 Field Cash Office Royal Army Pay Corps
 38. 601 Tactical Air Control Party (Forward Air Controller)
 39. 602 Tactical Air Control Party (Forward Air Controller)
 40. 603 Tactical Air Control Party (Forward Air Controller)
-

Serial	Flying Squadrons	Aircraft
1.	1 (F) Squadron ¹	Harrier GR3
	Detachments of:	
2.	10 Squadron	VC 10 C Mk 1
3.	18 Squadron	Chinook HC Mk 1
4.	24 Squadron	Hercules C Mk 1
5.	30 Squadron	Hercules C Mk 1
6.	47 Squadron	Hercules C Mk 1
7.	70 Squadron	Hercules C Mk 1
8.	22 Squadron	Phantom FGR2
9.	42 Squadron	Nimrod Mk 1
10.	44 Squadron	Vulcan B2
11.	50 Squadron	Vulcan B2
12.	101 Squadron	Vulcan B2
13.	55 Squadron	Victor K2
14.	57 Squadron	Victor K2
15.	120 Squadron	Nimrod Mk 2
16.	201 Squadron	Nimrod Mk 2
17.	206 Squadron	Nimrod Mk 2
18.	202 Squadron	Search and Rescue Sea King
	Royal Air Force Regiment	Description
19.	3 (Regiment)	Wing Headquarters Unit
20.	15 (Regiment)	Squadron Detachment Field Squadron
21.	63 (Regiment)	Squadron (Rapier)
	Other Units	
22.	Tactical Communications Wing	
23.	Tactical Supply Wing	
24.	Explosive Ordnance Disposal Team	

Note:

¹ Embarked in HMS *Hermes* and ashore.

Weapons Systems Performance against Enemy Aircraft

Serial	Weapon System	Aircraft Kills Confirmed	Probable ¹
1.	Sea Harrier with Sidewinder AIM 9L Missile	16	1
2.	Sea Harrier with 30mm Aden Cannon	4	2
3.	Sea Wolf	5	---
4.	Sea Dart	8	---
5.	Sea Cat	8	2
6.	Rapier	14	6
7.	Blowpipe	9	2
8.	Stinger	1	---
9.	Others ²	7	1
	Total ³	72	14

Notes:

¹ A probable kill is one where there are reasonable grounds to believe an aircraft was destroyed, but there is insufficient weight of collateral evidence to claim a confirmed kill.

² Others comprise 4.5" gun, 20mm, 40/60mm Bofors, Rarden Cannon and small arms.

³ An estimated total of 117 Argentine aircraft were destroyed (including probables and those destroyed on the ground). This total comprises: 45 A4 Skyhawk, 27 Mirage, 21 Pucara, 4 Mentor, 3 Aermacchi, 3 Canberra, 2 Skyvan, 1 C130 Hercules, 1 Lear Jet, 6 Puma, 2 Bell Huey and 2 Chinook (the last three aircraft types named being helicopters).

Ship and Aircraft Losses

Ships

Serial	Date	Ship
1.	4 May	HMS <i>Sheffield</i>
2.	21 May	HMS <i>Ardent</i>
3.	23 May	HMS <i>Antelope</i>
4.	25 May	HMS <i>Coventry</i>
5.	25 May	<i>Atlantic Conveyor</i>
6.	8 June	RFA <i>Sir Galahad</i>

Aircraft

Lost to Enemy Fire

Other Losses

Serial	Date	Aircraft Type	Parent Service	Serial	Date	Aircraft Type	Parent Service
1.	4 May	Sea Harrier	RN	1.	22 April	2 Wessex 5	RN
2.	21 May	Lynx ¹	RN	2.	23 April	Sea King Mk 4	RN
3.	21 May	2 Gazelle	RM	3.	6 May	2 Sea Harrier	RN
4.	21 May	Harrier GR3	RAF	4.	12 May	Sea King Mk 5	RN
5.	25 May	6 Wessex 5 ²	RN	5.	18 May	Sea King Mk 5	RN
6.	25 May	Lynx ³	RN	6.	19 May	Sea King Mk 4	RN
7.	25 May	3 Chinook ³	RAF	7.	20 May	Sea King Mk 4	RN
8.	25 May	Lynx ⁴	RN	8.	24 May	Sea Harrier	RN
9.	27 May	Harrier GR3	RAF	9.	29 May	Sea Harrier	RN
10.	28 May	Scout	RM	10.	8 June	Harrier GR3	RAF
11.	30 May	Harrier GR3	RAF				
12.	2 June	Sea Harrier	RN				
13.	6 June	Gazelle	Army				
14.	12 June	Wessex 3 ⁴	RN				

Notes:

¹ Lost in bomb attack on HMS *Ardent*.

² Lost in *Atlantic Conveyor*.

³ Lost when HMS *Coventry* sank.

⁴ Lost in missile attack on HMS *Glamorgan*.

100

HER MAJESTY'S STATIONERY OFFICE

Government Bookshops

49 High Holborn, London WC1V 6HB

13a Castle Street, Edinburgh EH2 3AR

Brazennose Street, Manchester M60 8AS

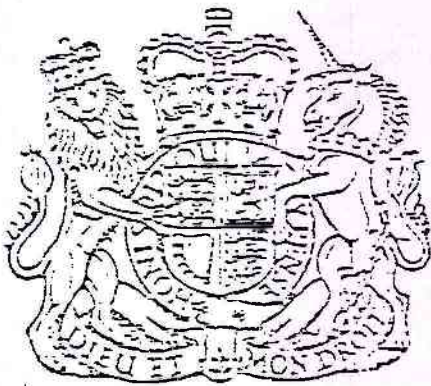
Southey House, Wine Street, Bristol BS1 2BQ

258 Broad Street, Birmingham B1 2HE

80 Chichester Street, Belfast BT1 4JY

*Government publications are also available
through booksellers.*

05



The Falklands Campaign: The Lessons

*Presented to Parliament by the Secretary of State for Defence
by Command of Her Majesty
December 1982*

LONDON

HER MAJESTY'S STATIONERY OFFICE

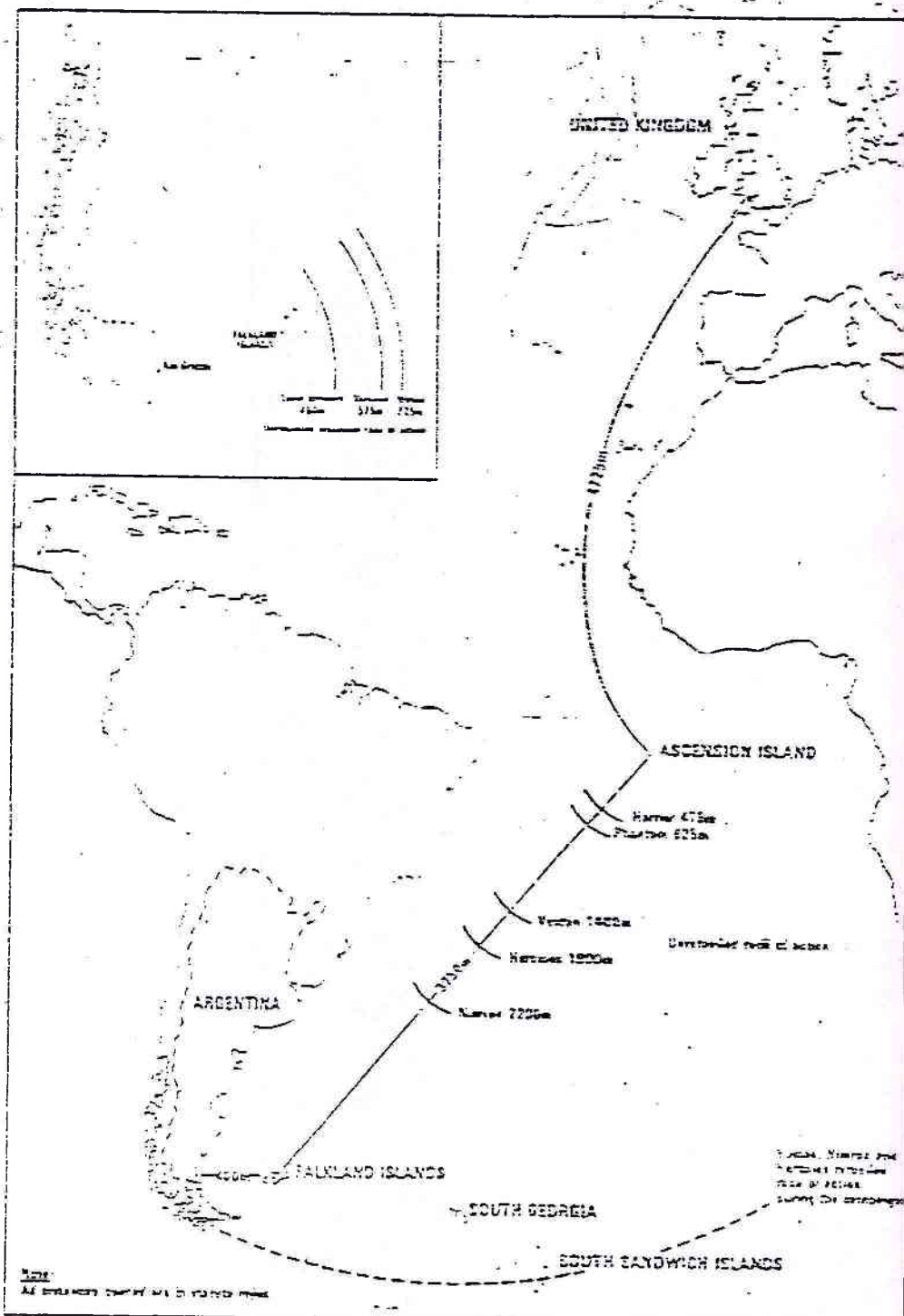
£3.95 net

Cmnd. 8758

Contents

	Page
Part 1. The Operation	5
Deployment	6
From South Georgia to San Carlos	7
From San Carlos to Fitzroy ...	10
Advance on Port Stanley ...	12
Chronology	13
Part 2. The Lessons	15
Introduction	15
Crisis Management and Command and Control ...	15
Men	16
Maritime Operations ...	16
Land Operations	17
Special Forces	17
Equipment	18
Procurement and Improvisation ...	24
Logistics and Personnel	25
Public Relations	28
Part 3. The Future	31
Conclusion	35
Annexes	
A. Composition of the task force and supporting elements:	
Table 1—Ships of the Royal Navy	37
Table 2—Squadrons of the Fleet Air Arm	38
Table 3—Ships of the Royal Maritime Auxiliary Service ...	39
Table 4—Ships of the Royal Fleet Auxiliary	39
Table 5—Ships taken up from trade	40
Table 6—Royal Marines	41
Table 7—Army Units	42
Table 8—Royal Air Force Units	44
B. Weapons systems performance against enemy aircraft ...	45
C. Ship and aircraft losses	46

()



Part 1

The Operation

101. On 2 April 1982 in an act of unprovoked aggression against British sovereign territory and British people Argentine forces invaded the Falkland Islands. The next day they invaded South Georgia. These invasions were launched despite urgent calls upon the Argentine Government from the President of the USA, the President of the United Nations (UN) Security Council and the Secretary General of the UN to desist from military action. The invasion was immediately condemned by the UN Security Council in its Resolution 502. That Resolution went on to call for an immediate withdrawal of the Argentine forces occupying the Falkland Islands, and for a peaceful settlement of the dispute.

102. The Government made clear from the first its willingness to accept and abide by Resolution 502. We engaged in intense and prolonged diplomatic activity in pursuit of a peaceful solution. But we could not depend upon it. We therefore took military steps intended to put pressure on Argentina to withdraw and to make possible our repossession of the Islands by force if that should ultimately prove necessary. Three days after the invasion HMS *Hermes* and HMS *Invincible* left the United Kingdom to head what was to become the largest task force in recent history.

103. While diplomatic efforts continued the net was gradually drawn more tightly around the Argentine garrison on the Falklands. On 12 April we imposed a maritime exclusion zone of 200 miles around the Falklands against Argentine naval ships. On 23 April we warned that any approach by Argentine forces which could amount to a threat to interfere with the mission of British forces in the South Atlantic would be dealt with appropriately. On 25 April the task force repossessed South Georgia. The recapture of South Georgia dealt a psychological blow to the Argentine Government and provided clear evidence of the United Kingdom's resolve and willingness to resort to military action if all other courses were closed. It also gave the task force an anchorage in the South Atlantic. On 29 April we warned that all Argentine vessels shadowing the task force would be liable to attack. Despite this increasing military pressure, however, Argentina showed no signs of yielding on any points which could make negotiations possible.

104. We took further measures: on 30 April a total exclusion zone was imposed; on 1 May Port Stanley airfield was bombed; and on 7 May we warned that any Argentine warship or military aircraft over 12 miles from the Argentine coast would be treated as hostile. Even at this stage the way was open for the Argentine Government to accept a peaceful withdrawal of their troops. They declined, and it became clear that the Falklands would have to be retaken by force.

105. The first major landing on the Falkland Islands was made at San Carlos Water on the night of 20/21 May. In the actions which followed there were inevitably setbacks and casualties. Nevertheless, just over three weeks later Major General Moore, the Land Force Commander, accepted the surrender of General Menendez and his force at Port Stanley. It was by any standards a brilliant campaign, marked by exceptional logistic planning and improvisation, and carried through with outstanding skill and fortitude.¹

Deployment

106. To despatch a task force in such a short space of time was a remarkable achievement. It was the result of close cooperation between the Services, the Merchant Navy, the Royal Dockyards and commercial ports, the stores and transport organisations of the Ministry of Defence, and Industry. The task force had to be stocked and provisioned for at least three months at sea. Many of the merchant ships required extensive modification to prepare them for their new rôle. Eventually over 110 ships were deployed.² These included 44 warships; 22 from the Royal Fleet Auxiliary (RFA); and 45 merchant ships whose civilian crews were all volunteers.

107. The Falkland Islands lie 3,000 miles south-west of the United Kingdom and over 3,500 miles from Ascension Island; but only 400 miles from the Argentine mainland. The task force needed to be self-sufficient in food, water, fuel, ammunition and all the other military equipment it might require. Sound transport and logistic arrangements were vitally important. The ships of the RFA and the Merchant Navy and the Royal Air Force's transport aircraft were to be the task force's lifeline. Merchant shipping alone transported 9,000 personnel, 100,000 tons of freight and 95 aircraft to the South Atlantic. The supply chain carried 400,000 tons of fuel. RFA support ships transferred ammunition, dry cargo and fuel on some 1,200 occasions, in addition to more than 300 helicopter transfers. British forces established a joint forward operating base at Ascension Island. The Royal Air Force moved over 5,300 people and 6,600 tons of stores through Ascension Island in more than 600 sorties by Hercules and VC10 aircraft. Hercules aircraft also made some 40 supply drops to the task force, which entailed mid-air refuelling in round-trips lasting, in many cases, over 25 hours. This massive logistic effort enabled the warships and the aircraft of the task force to operate continuously without returning to distant bases for provisions.

108. In the space of seven weeks a task force of 23,000 men and over 100 ships had been assembled, sailed 3,000 miles, effectively neutralised the Argentine navy and fought off persistent and courageous attacks from combat aircraft which outnumbered its own by more than six to one. This in itself was no mean feat, but the task force then put ashore 10,000 men on a hostile coast while under threat of heavy air attack; fought several pitched battles against an entrenched and well supplied enemy who at all times outnumbered our forces; and brought them to surrender within three and a half weeks.

Note:

¹ Details of the composition of the task force and supporting elements are given in Annex A.

From South Georgia to San Carlos

109. The first action at sea took place off South Georgia when on 25 April the Argentine submarine *Santa Fe* was attacked on the surface some five miles from the main harbour at Grytviken. She was badly damaged and subsequently beached. The same day the Island was repossessed by Royal Marines and Special Forces (which comprise the Special Air Service (SAS) and the Special Boat Squadron (SBS) of the Royal Marines (RM)). On 1 May a Vulcan followed by Sea Harriers carried out their first attacks on the Falklands, and the first Argentine aircraft were shot down. The carrier group made a major demonstration of force, simulating an amphibious landing off Port Stanley which successfully drew the Argentines and revealed some of their defensive positions.

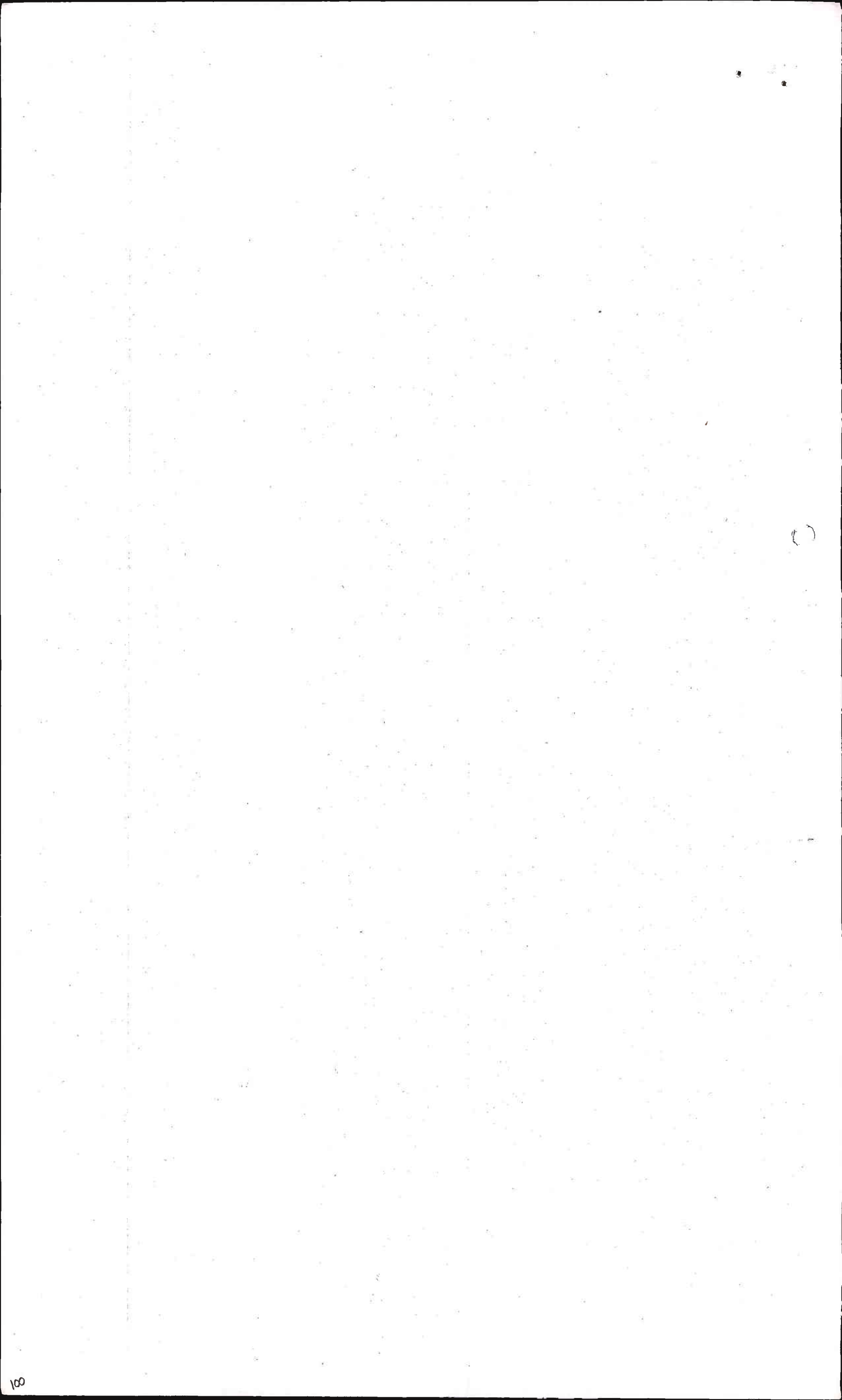
110. On 2 May HMS *Conqueror* detected the Argentine cruiser, *General Belgrano*, accompanied by two destroyers, sailing near to the total exclusion zone. Other Argentine ships were also thought to be probing our defences to the north of the zone. The *Belgrano*, and her escorts armed with Exocet missiles, posed a clear threat to the ships of the task force. She was therefore attacked and sunk by torpedoes. Thereafter major Argentine warships remained within 12 miles of the Argentine coast and took no further part in the Campaign. Argentine submarines continued to pose a serious threat, but no task force ships were successfully attacked.

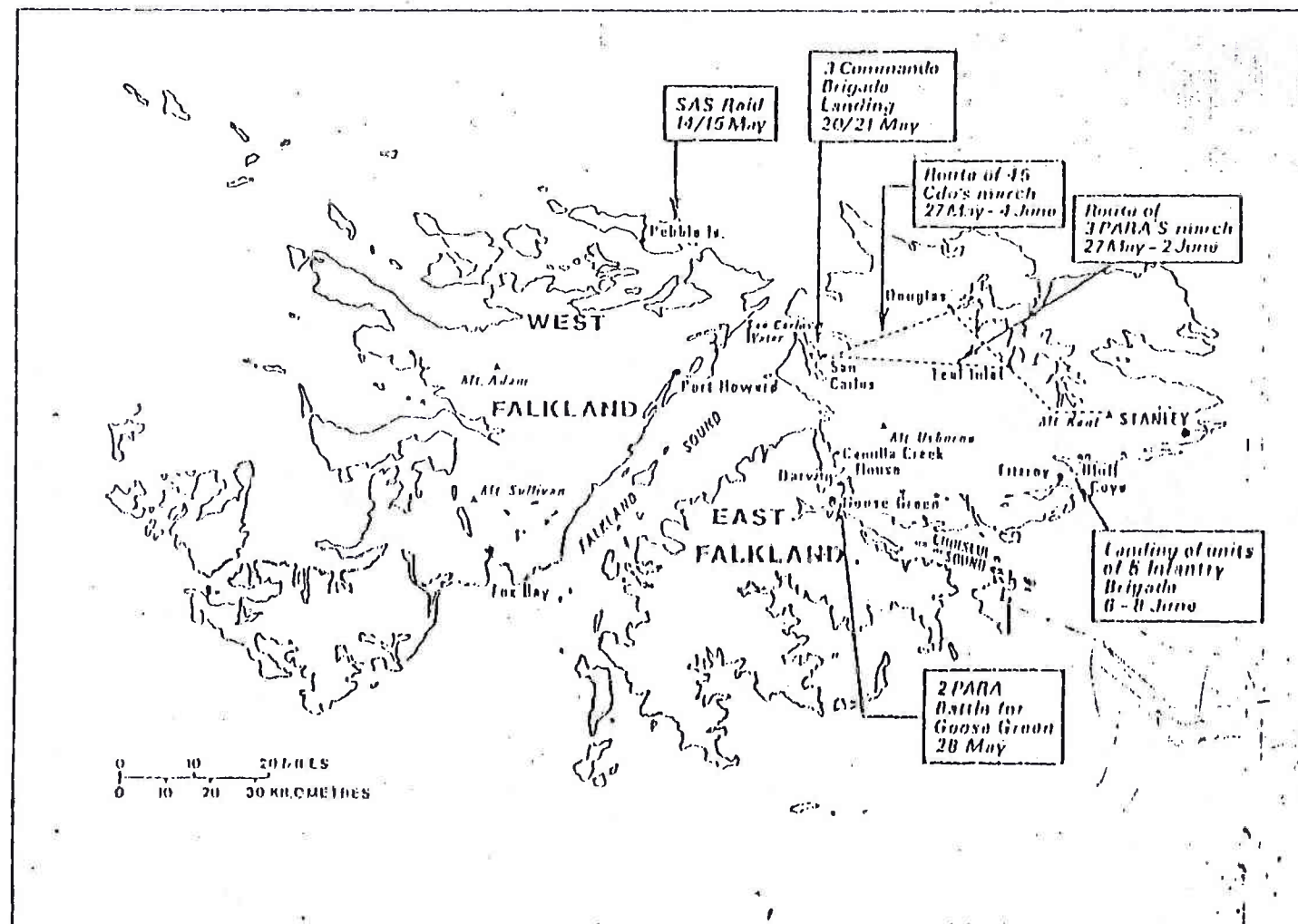
111. The task force suffered its first major loss on 4 May. HMS *Sheffield*, while on forward radar picket duty, was hit by an Exocet missile launched from an Argentine Super Etendard aircraft. The missile hit fuel tanks amidships and serious fires started, which filled the central section of the ship with acrid smoke. After nearly four hours, with the fires increasing in intensity, the Captain gave orders to abandon ship. 20 members of her crew died.

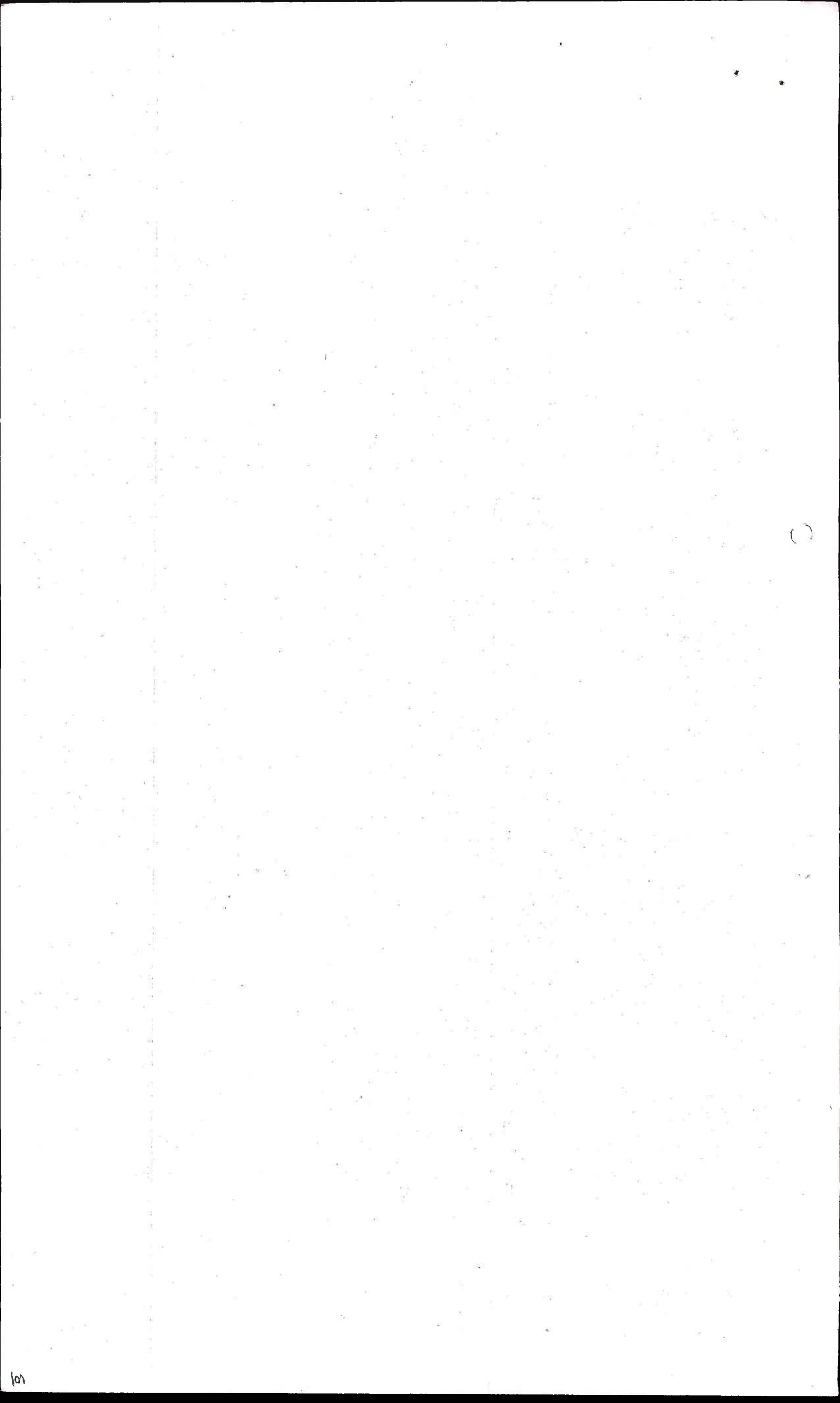
112. By mid-May the task force had accomplished two of its main tasks: the movement of the troops safely to the South Atlantic and the establishment of control of the seas around the Islands. The rôle of the carriers, HMS *Hermes* and HMS *Invincible*, was crucial at this and subsequent stages in providing air defence and the means of attacking enemy ships and ground positions, while their helicopters provided constant anti-submarine protection.

113. It was now necessary to put land forces ashore in sufficient strength to repossess the Islands. San Carlos was chosen as the site for the amphibious landing because it offered a good anchorage which could be protected against submarine attack and was an area known to be lightly defended by the enemy and difficult for him to reinforce rapidly. The low hills surrounding the inlet afforded good protection against the risk of Exocet attack. Men of the SAS and the SBS had for some time been reconnoitring East and West Falkland. Taking advantage of the intelligence they had gained, and under cover of a Naval bombardment, the SAS carried out a daring night raid on Pebble Island on 15 May. They destroyed 11 Argentine aircraft on the ground.

114. On 20 May the main amphibious force moved towards San Carlos Water, taking advantage of an overcast sky and poor visibility, and keeping strict radio silence. Meanwhile Special Forces mounted a series of diversionary raids at various points around East Falkland. Under cover of Naval gunfire,







()

men of the 3rd Commando Brigade RM (3 Cdo Bde), including the 2nd and 3rd Battalions, the Parachute Regiment (2 PARA and 3 PARA), embarked in their landing craft and headed for the shore. The landing was made over four beaches. Helicopters operated continuously, moving stores and helping to establish the beach-head. The operation achieved complete tactical surprise. 5,000 men were safely landed, and what little opposition there was quickly collapsed. British losses in this phase were two helicopters and their crews.

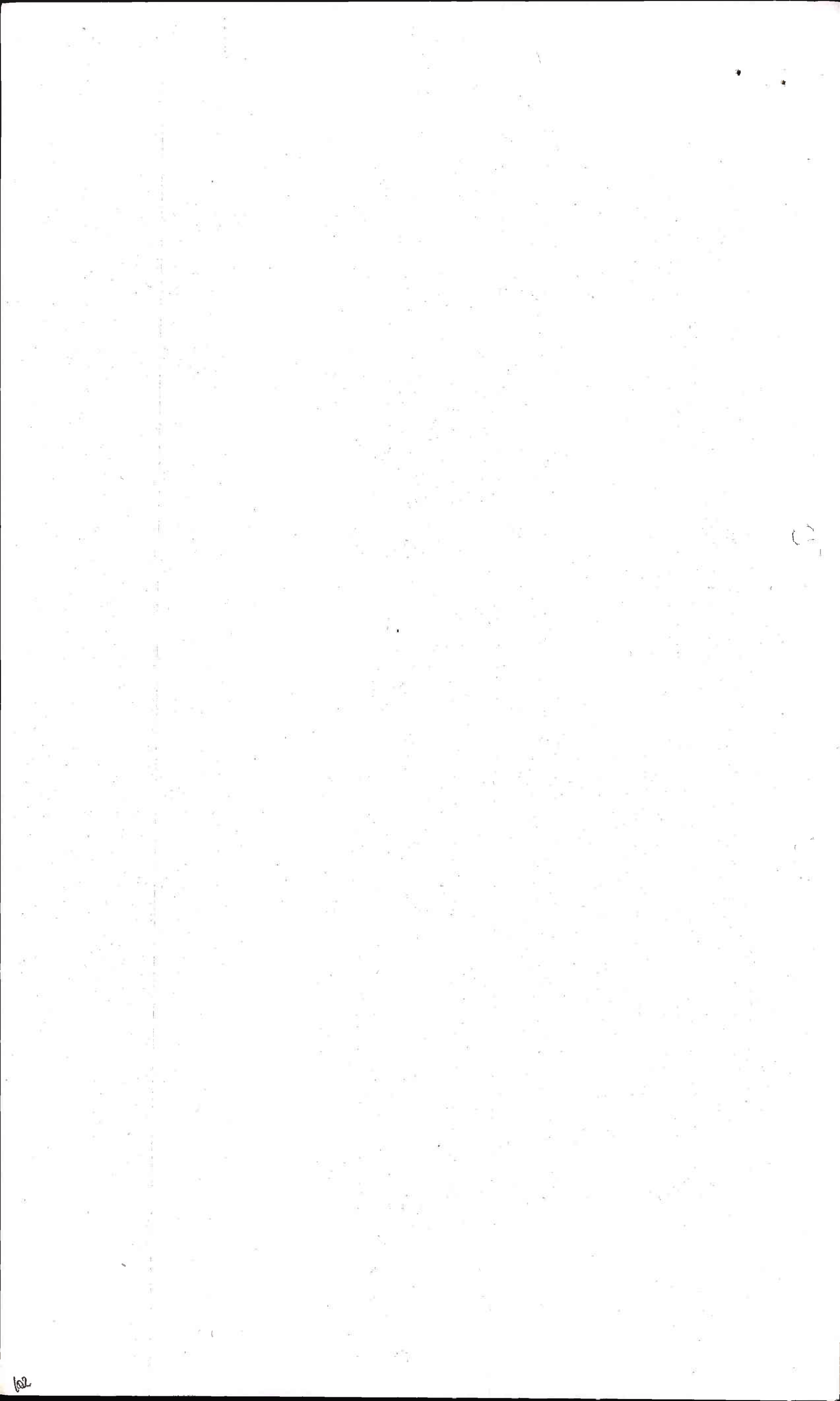
115. The next morning brought clear blue skies, but the landing force had won a vital few hours to establish defensive positions and begin to set up their Rapier fire units. At mid-day the Argentine air force began a series of fierce and protracted attacks against the beach-head and the ships supporting it.

116. The Sea Harriers on combat air patrol provided the outer layer of defence. The second layer was provided by a pair of ships known as the 'missile trap', positioned off the northern entrance to Falkland Sound. These were usually a Type 42 destroyer armed with Sea Dart and a Type 22 frigate with Sea Wolf. The next layer of defence, which became known as the 'gunline', was a group of three or four ships inside the entrance to the Sound using every gun and missile system they possessed to fight off the incoming Argentine aircraft. Finally within the anchorage itself (nicknamed 'bomb alley'), where there were often up to eight troop or stores ships at any one time, the small calibre guns and Sea Cat missiles from the assault ships, HMS *Intrepid* and HMS *Fearless*, together with Blowpipe missiles, machine guns and notably the Rapier fire units on shore provided the final layer of defence.

117. The Argentine pilots were courageous and persistent in their attacks and ships of the task force suffered loss and damage during the first few days after the landing. On the 'gunline' we lost HMS *Ardent* and HMS *Antelope* on 21 and 23 May; 24 men died. Six other ships were damaged between 21 and 24 May. But the Argentines paid a heavy price. On 21 May British forces shot down some 15 attacking aircraft. When attacks resumed on 23 May, 10 attacking aircraft were destroyed; on 24 May a further 18 were shot down.

118. On 25 May, Argentina's National Day, the Argentine air force made a major effort against the task force. HMS *Coventry* had been in the 'missile trap' to the north-west and had successfully controlled Sea Harriers and shot down three aircraft herself. She was attacked at low level by waves of Skyhawk aircraft which overwhelmed her defences. She capsized quickly. Survivors were rescued by HMS *Broadsword* and helicopters; 19 men died. Air attacks on the beach-head now became much less frequent and British forces were safely established ashore. The battle of San Carlos had been won.

119. Away from the beach-head air attacks continued. On 25 May the merchant ship, *Atlantic Conveyor*, which had delivered Harriers to the task force and was carrying much needed supplies, including helicopters, was north-east of the Falklands. Two Exocet missiles, launched from Argentine Super Etendard aircraft, hit the *Atlantic Conveyor*. The ship was set on fire. The fire spread rapidly and the ship was abandoned with the loss of 12 lives. A third attack on the task force by air-launched Exocet on 30 May was successfully countered.



From San Carlos to Fitzroy

120. With the establishment of a firm bridge-head the advance on Port Stanley became the next objective. One threat to the flank of any attack on Port Stanley lay in the significant Argentine garrison and airfield at Darwin and Goose Green. 2 PARA was given the task of removing that danger and seeking an early victory. Overnight on 26/27 May one company of 2 PARA secured Camilla Creek House. After a 12 mile night approach march the rest of the battalion joined them and lay up for the day. An artillery troop of three 105mm light guns was flown into position to assist in the impending assault which started at 0200 hours on 28 May.

121. 2 PARA began by attacking Darwin, supported by Naval gunfire. The settlement was secured by mid-afternoon but the battalion was then faced with an advance on Goose Green, where the enemy were dug into strong defensive positions which had to be approached across the open ground of a narrow isthmus. Harrier aircraft were called in to attack the Argentine positions. The battalion was attacked by Pucara light aircraft from Goose Green, one of which was shot down by a Blowpipe missile. The battalion eventually overcame stiff resistance and pushed the enemy back into the settlement. A timely strike by the Harriers considerably helped the progress of the paratroopers and the next day the Argentine commander surrendered. British dead totalled 17.

122. Besides securing the flank the battle was significant for two reasons. First it gave us a chance to assess the fighting qualities of the enemy. Second, and more importantly, by their outstanding performance against a numerically superior enemy 2 PARA established a psychological ascendancy over the Argentines which our forces never lost.

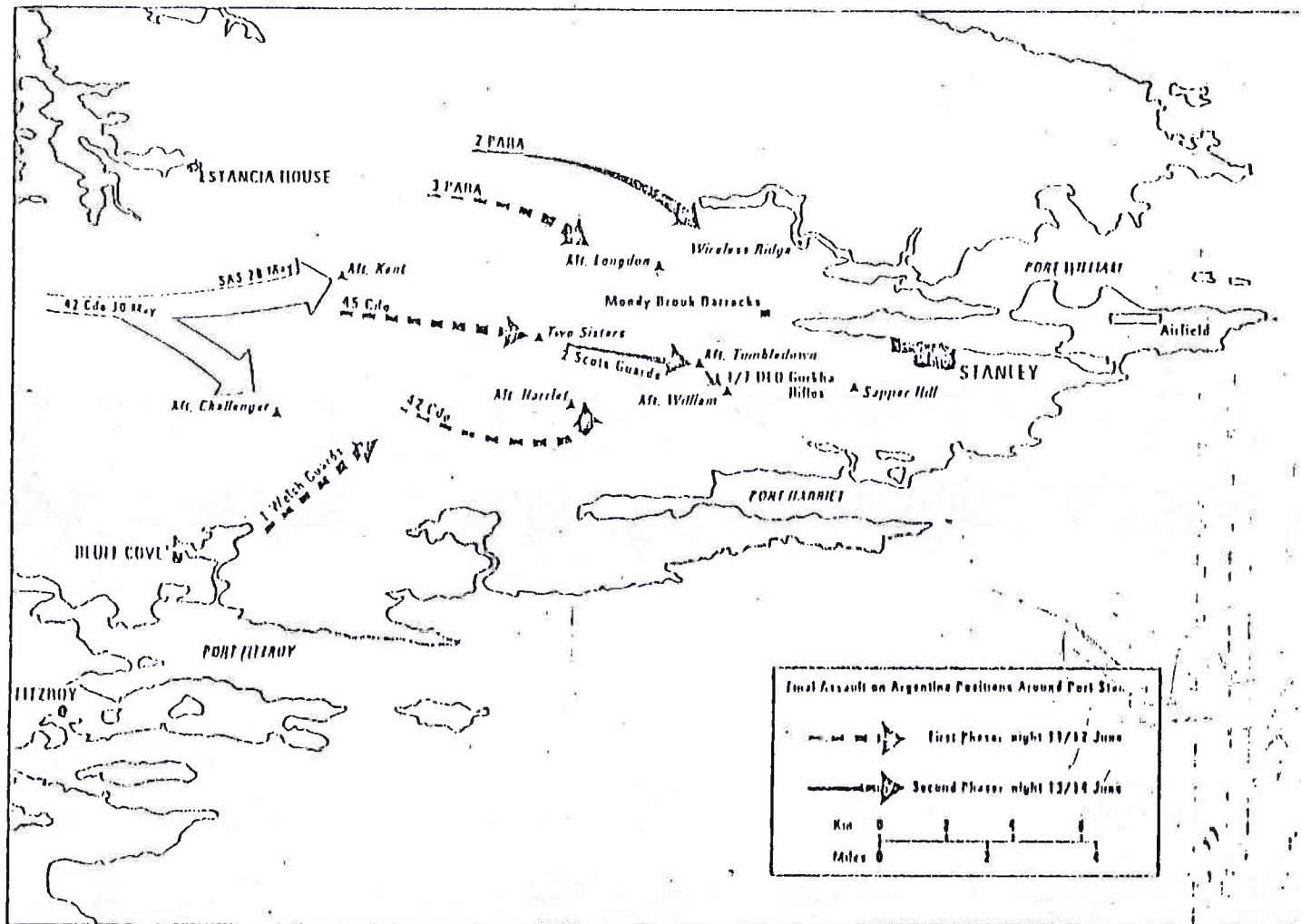
123. In the course of a remarkable march of 30 miles over difficult terrain in inhospitable conditions, 45 Cdo and 3 PARA secured Douglas Settlement and Teal Inlet on 30 May. Meanwhile the SAS had established a patrol base forward on Mount Kent. 42 Cdo, making best use of the helicopter lift available, leap-frogged forward to secure Mount Kent and Mount Challenger, the western approaches to Port Stanley. On the same day Major General Moore assumed command of all land operations. The 5th Infantry Brigade (5 Bde) came ashore on 1 June.

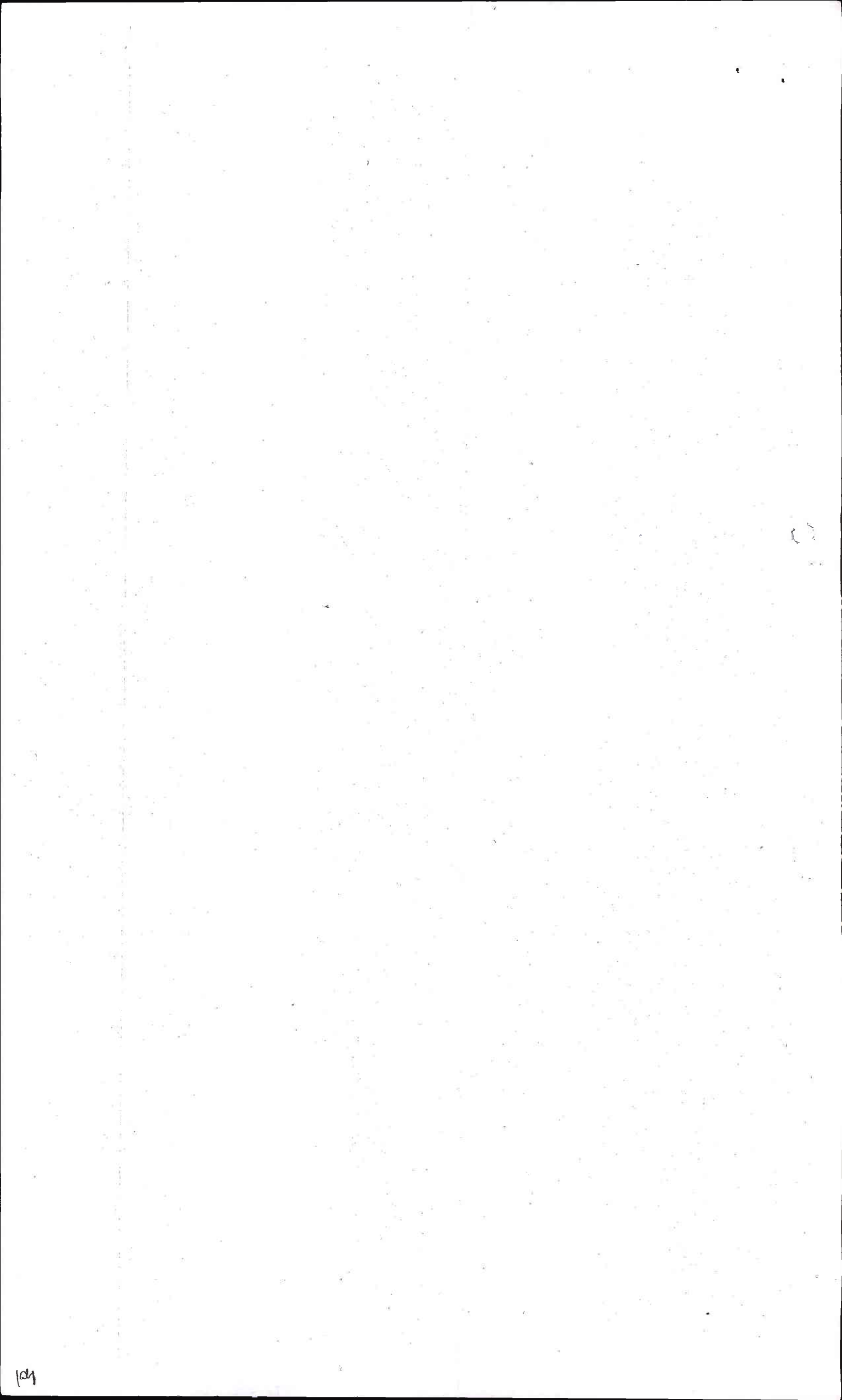
124. The Land Force Commander decided to press on quickly with the advance on Port Stanley and to commit 5 Bde to the South. When it was discovered that the Argentines had evacuated Fitzroy settlement 2 PARA moved forward rapidly to secure the area, which was an important point in the advance on Stanley. The 1st Battalion 7th Duke of Edinburgh's Own Gurkha Rifles and the rest of 2 PARA advanced by sea and by air while the 2nd Battalion Scots Guards, the 1st Battalion Welsh Guards and logistic support units were transported to Fitzroy by sea. The loss of Chinook helicopters on the *Atlantic Conveyor* had effectively precluded the option of air-lifting the bulk of 5 Bde. Passage by sea was therefore the only way to move forward quickly, maintaining the imperus of the advance and minimising the risk of Argentine counter-attack. On the nights 5/6 and 6/7 June the Scots Guards and elements of the Welsh Guards were successfully moved by HMS *Intrepid* and HMS *Fearless*.

314485

11

B-2





The deployment of the balance of the Welsh Guards was thwarted by appalling weather. On the night 7/8 June RFA *Sir Galahad* was despatched with support units and the remaining Welsh Guards. On 8 June the cloud lifted and, before the final elements had been disembarked from the landing ships, RFA *Sir Galahad* and RFA *Sir Tristram* were hit by an air strike at Fitzroy. Both ships were abandoned. The *Sir Galahad*, which had a large number of men on-board, was burnt out. 50 men lost their lives, of whom 32 were from the 1st Battalion Welsh Guards. The courageous efforts of the helicopter pilots and rescue boat crews, who took their craft again and again into the flames and blinding smoke rising from the stricken vessel, prevented greater loss of life. But for the bravery of the seamen and the dedication of all those who assisted ashore the loss of life would have been much greater. Later that day a pair of patrolling Sea Harriers destroyed four Mirages over Choiseul Sound.

Advance on Port Stanley

125. Despite previous set-backs through loss of men and equipment, particularly helicopters, the first phase of the main battle for Port Stanley began on 11/12 June when 3 Cdo Bde mounted a three battalion night attack. Simultaneously targets further to the east were bombarded by Naval vessels. As a result of vigorous and aggressive patrolling the troops were able to achieve initial surprise, and after a night of stiff fighting 3 PARA took Mount Longdon, 45 Cdo captured Two Sisters, and 42 Cdo captured Mount Harriet. British casualties were 22 killed and 44 wounded. Throughout the following day, all these positions came under considerable enemy artillery fire, causing more casualties. The shelling was not, however, all one way: the Argentine defences were heavily bombarded by our own artillery and at night by Naval guns.

126. During the night of 11/12 June HMS *Glamorgan* was withdrawing from a bombardment of shore positions around Port Stanley when she was hit by a shore-launched Exocet missile. Her company extinguished severe fires and the ship continued to be available for action. 13 men died. It was the last direct attack on a British ship in the Campaign.

127. The second phase took place on the night of 13/14 June. In the north, in another superbly executed night attack, 2 PARA captured Wireless Ridge. Further south the Scots Guards had a hard fight to capture Tumbledown Mountain from a regular Argentine Marine battalion whose heavily defended machine gun emplacements put up fierce resistance for a number of hours. The Scots Guards secured their objectives and the Gurkhas moved through to take Mount William to the south-west. In this final phase we lost 20 men.

128. Large numbers of the enemy abandoned their positions, discarded their weapons and stood around disconsolately. British troops followed up to the edge of Port Stanley where they were ordered to halt and fire only in self defence, to avoid fighting in the town and among the civilian population. Soon afterwards white flags were reported over Stanley and General Moore accepted the Argentine surrender.

Chronology

- 2 April Argentina invades the Falkland Islands.
- 3 April Argentina invades South Georgia; UN passes Security Council Resolution 502; first RAF transport aircraft deploy to Ascension Island.
- 5 April First task force ships sail from the United Kingdom.
- 12 April 200 mile maritime exclusion zone comes into effect.
- 23 April The Government warns Argentina that any approach by Argentine warships or military aircraft which could amount to a threat to the task force would be dealt with appropriately.
- 25 April British Forces recapture South Georgia; submarine *Santa Fé* attacked and disabled.
- 30 April Total exclusion zone comes into effect.
- 1 May First attack on Falklands by Vulcan, Sea Harriers and warships; first Argentine aircraft shot down.
- 2 May General *Beigrano* sunk by HMS *Conqueror*.
- 4 May HMS *Sheffield* hit by Exocet missile; later sinks.
- 7 May The Government warns Argentina that any Argentine warships and military aircraft over 12 miles from the Argentine coast would be regarded as hostile and liable to be dealt with accordingly.
- 9 May Two Sea Harriers sink trawler, *Narwal*, which had been shadowing task force.
- 11 May HMS *Alacrity* sinks store ship *Cabo de los Estados* in Falkland Sound.
- 14/15 May Special Forces night raid on Pebble Island; 11 Argentine aircraft destroyed on the ground.
- 21 May 3 Cdo Bde establish beach-head at San Carlos; HMS *Ardent* lost; some 15 Argentine aircraft destroyed.

23 May	HMS Antelope crippled (sinks on 24 May); 10 Argentine aircraft destroyed.
24 May	18 Argentine aircraft destroyed; some damage to ships.
25 May	HMS Coventry lost and Atlantic Conveyor hit by Exocet; (sinks 28 May); 5 Argentine aircraft destroyed.
28 May	2 PARA recapture Darwin and Goose Green.
30 May	45 Cdo secure Douglas settlement; 3 PARA recapture Teal Inlet; 42 Cdo advance on Mount Kent and Mount Challenger.
1 June	5 Bde land at San Carlos.
8 June	RFAs Sir Galahad and Sir Tristram hit at Fitzroy; 10 Argentine aircraft destroyed.
11/12 June	Mount Harriet, Two Sisters and Mount Longdon secured; HMS Glamorgan hit by shore-based Exocet— damaged but seaworthy.
13/14 June	Tumbledown Mountain, Wireless Ridge and Mount William secured; General Menendez surrenders.
20 June	South Thule secured.
25 June	Mr. Hunt, Civil Commissioner, returns to Port Stanley.

Part 2

The Lessons

Introduction

201. The Falklands Campaign was in many respects unique. We must be cautious, therefore, in deciding which lessons of the Campaign are relevant to the United Kingdom's main defence priority—our rôle within NATO against the threat from the Soviet Union and her allies. The basic ingredients for success were present from the outset: a firm resolve; flexibility of force; equipments and tactics; human ingenuity; and well trained officers and men.

202. From the outset the Government were heartened by the understanding and support of the United Kingdom's partners in the European Community, our Allies in NATO and, not least, our friends in the Commonwealth. This international support, which in many cases represented a clear choice of principle over material interest by the Governments concerned, was of value in bringing home to the Argentine leaders the extent of their international isolation. It also extended in some instances to the provision of material assistance which was of direct benefit to the task force.

203. The Campaign provided the Royal Navy's first experience of battle in the missile age. At San Carlos British forces undertook the first large-scale amphibious operation for many years. And in the land battles for Port Stanley they experienced an infantry battle at brigade strength and in extreme weather conditions. Our analysis of the Campaign is continuing; some new lessons have been learned; many more old lessons have been reinforced. The following sections describe the principal lessons and the steps we are taking to apply them.

Crisis Management and Command and Control

204. The higher management of the crisis was conducted by a small group of Ministers which was chaired by the Prime Minister and met almost daily. The Attorney General attended meetings when legal advice was required. Those in attendance always included the Chief of the Defence Staff, as the Government's principal military adviser. This group of Ministers ensured that the diplomatic, economic and military strands of our policy were properly coordinated. On the military side it established clear guidelines within which commanders were to conduct the operations, without making any attempt to direct the battle from 8,000 miles away. This short and clear chain of command made possible quick reaction to events and to the needs of the forces in the South Atlantic.

205. Effective political control and higher command of the operation required good communications between the United Kingdom and the task force. The vital importance was shown of satellite communications in operations conducted at great distance. There were times during the Falklands Campaign when

flow of signal traffic to the task force threatened to exceed the capacity of available systems. This never delayed the transmission of important operational messages but it did affect some other traffic. We currently plan to acquire a new British military satellite and to provide a terminal in all main surface warships, which will be a significant improvement. As the task force sailed south it became increasingly important to receive frequent detailed situation reports from the area of operations, both as general background for decision makers in Whitehall and as the essential basis for early and accurate announcements to Parliament and the media on events in the South Atlantic. Hard pressed local commanders were not always able to provide these and for the future we are considering how they might be enabled to do so. It will not, of course, be the intention to impose any detailed direction of action in the field, which must remain the responsibility of the commander on the spot.

206. We have studied the management of the crisis carefully. In particular we have looked at the effectiveness of inter-Departmental coordination and the liaison between the Ministry of Defence and operational headquarters, which in this case was the headquarters of the Commander-in-Chief Fleet. In every important respect the Government and military machines worked extremely well during the crisis.

Men

207. The most important factor in the success of the task force was the skill, stamina and resolution displayed by individual Servicemen. The value of professional, volunteer, highly trained and carefully selected Armed Forces was amply demonstrated. The specialised training of a substantial proportion of the landing force—such as the Commandos—was a particularly significant asset. The quality of British Servicemen was exemplified by the defence of the landing at San Carlos; by the determined assault on heavily defended enemy positions at Goose Green; by the remarkable series of night attacks before the fall of Port Stanley; and by the outstanding performance of the Harrier and helicopter pilots.

208. The manner in which the task force responded to the many challenges and difficulties it encountered totally vindicated the priority we attach to training at all levels, from the teaching of individual skills to large-scale exercises. The Campaign highlighted the importance of both physical and mental toughness. To achieve and maintain this we need to keep readiness and training at as high a level as possible.

Maritime Operations

209. The operations of the task force at sea were guided by three established principles of maritime warfare: containment of enemy forces, defence in depth and keeping the initiative. The course of the Campaign emphasised the relevance of these principles and the importance of a balanced fleet, the RFA's ability to replenish RN ships at sea and the support of ships from the Merchant Navy. The key questions of warship performance and maritime air defence are discussed in paragraphs 218-221 and 225-230.

Amphibious Warfare

210. The experience gained by the Royal Navy and Royal Marines from their extensive training in amphibious operations proved vital. The landings at San Carlos clearly demonstrated the ability of HMS *Fearless* and HMS *Inverness* to launch and support amphibious operations and the value of suitably adapted merchant ships to supplement the logistic landing ships. 3 Cdo Bde, reinforced by 2 PARA, 3 PARA and other elements proved ideally suited for the task. The helicopters deployed with the landing force played an invaluable part. The weather, terrain and the likely requirement to land away from established ports were similar to the conditions British forces would face in Norway, on NATO's northern flank. The success of the Falklands Campaign bore out our confidence, and that of our Allies, in the ability of British amphibious forces to react swiftly and effectively to emergencies in and away from the NATO area.

Nuclear-powered submarines

211. Our nuclear-powered submarines (SSN) played a crucial rôle. After the sinking of the *General Belgrano* the Argentine surface fleet effectively took no further part in the Campaign. The SSNs were flexible and powerful instruments throughout the crisis, posing a ubiquitous threat which the Argentines could neither measure nor oppose. Their speed and independence of support meant that they were the first assets to arrive in the South Atlantic, enabling us to declare the maritime exclusion zone early. They also provided valuable intelligence to our forces in the total exclusion zone.

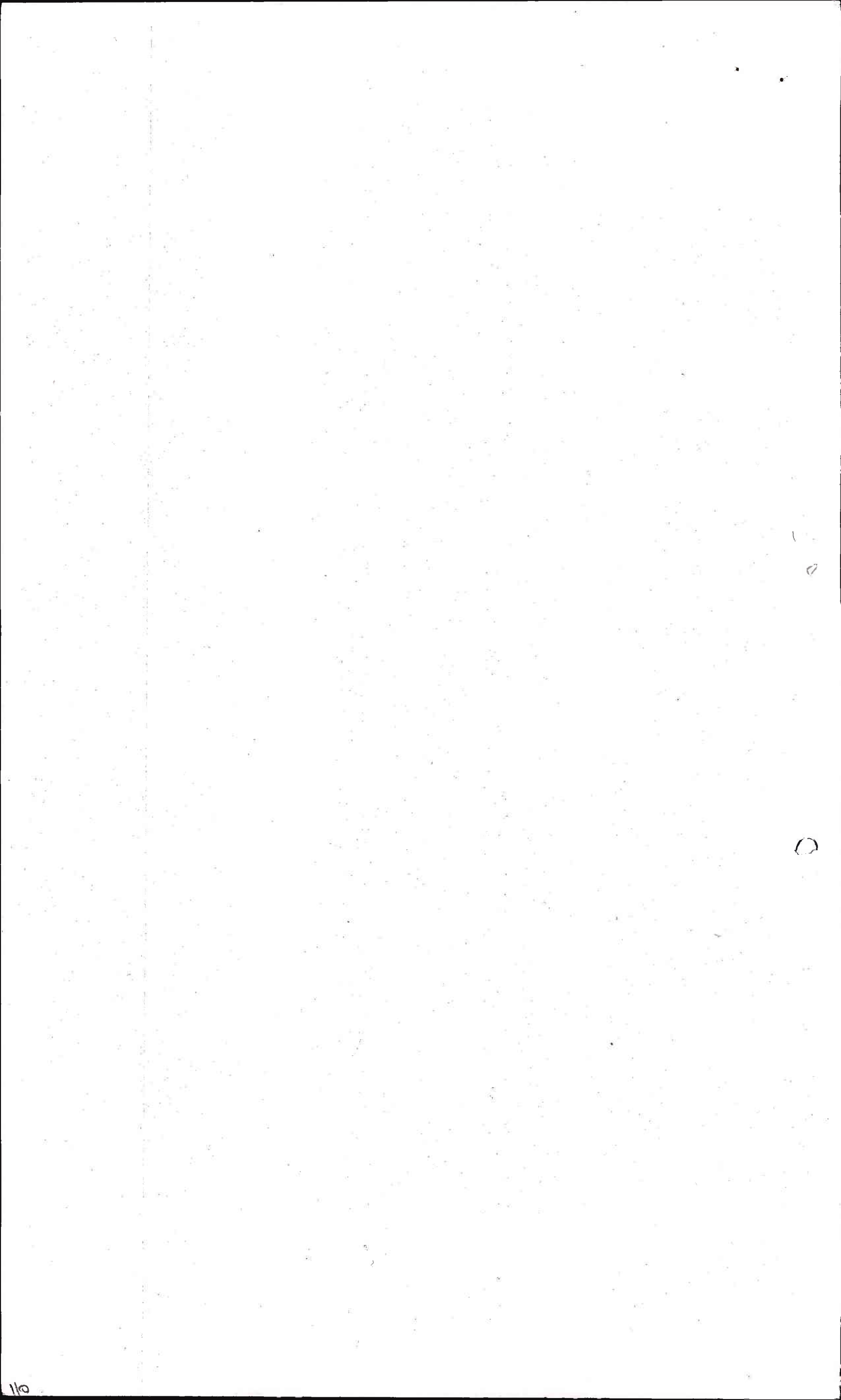
Land Operations

212. The most decisive factors in the land war were the high state of individual training and fitness of the land forces, together with the leadership and initiative displayed especially by junior officers and NCOs. The Campaign underlined the importance of night operations and aggressive patrolling, which were particularly decisive during the determined series of attacks around Port Stanley, where assaults were conducted against a prepared enemy with clear fields of fire. A number of lessons will be reflected in training priorities and equipment plans. The present types of weapons proved effective but the infantry need to be supported by greater direct and indirect firepower in attack. Milan and 66 mm anti-tank weapons proved highly successful against prepared enemy positions, but there is also a requirement for an area attack weapon such as a grenade launcher.

213. The infantry would not have been able to carry their objectives without the support they received from artillery and Naval bombardment. The ability of the 105 mm light guns to bring down instant and accurate fire at night or through smoke and fog contributed significantly to the final collapse of Argentine morale. The importance was underlined of all ranks being trained and able to call for fire.

Special Forces

214. The SAS and the SBS played a key rôle in the Campaign. They operated in advance of the main land forces to gather essential intelligence, and also



conducted widespread raids to confuse and disorganise the Argentine force. This tactic was notably successful in assisting the landing force to come ashore virtually unopposed at San Carlos. Later, they moved ahead of the landing force to reconnoitre the high ground around Mount Kent, from which the final assault was launched on the Argentine positions in front of Port Stanley.

215. In the most demanding circumstances the Special Forces were thoroughly tested in the skills and tactics which they would employ in any future war in the NATO area. Their response has justified our confidence that existing selection and training methods produce Special Forces which are well prepared for the calls that might be made on them in general war. The combination of a single patrol of intelligence-gathering skills and the capacity to mount highly destructive raids gives military commanders a flexible and potent weapon. Experience in the Falklands confirmed this, as well as providing useful lessons for the future, particularly about improvements in equipment.

Equipment

216. Weapons systems depend for their effectiveness not only on their inherent quality but also on the thorough and realistic training of their operators, on first class maintenance, spares and servicing. The Armed Forces are organised and equipped primarily for operations in the NATO area against Warsaw Pact. In the South Atlantic they faced a different challenge. Particularly aircraft, but also other equipments, were constantly in demand to perform unfamiliar tasks which were important to the operation. The effects of a long sea passage and damp on land-based missiles, electronics and other equipment had to be overcome. On the other hand, some conditions were easier than they would be in NATO operations: for example, the virtual absence of electronic counter-measures (ECM) in the Argentine inventory.

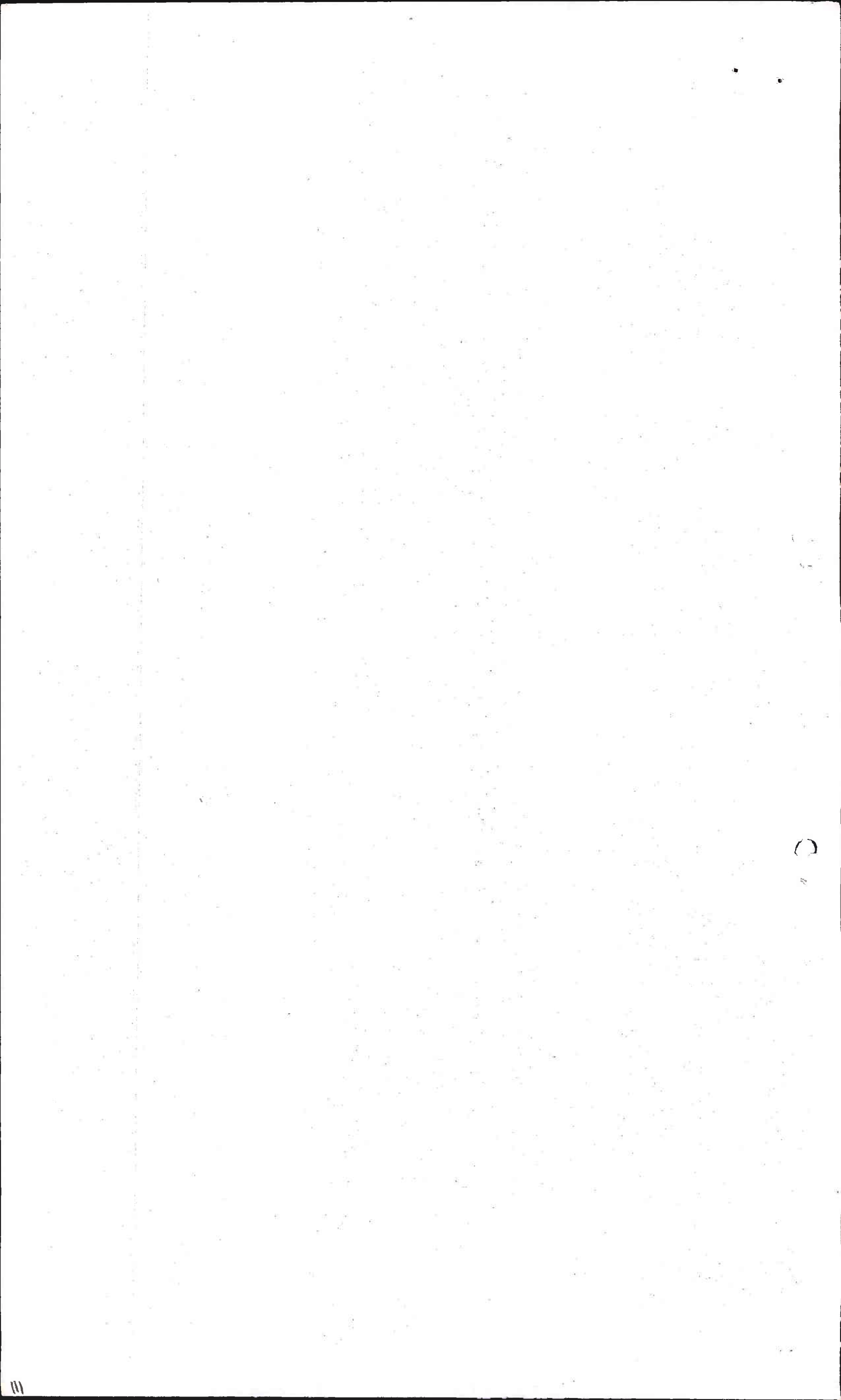
217. Nevertheless, the Campaign provided a unique opportunity to test our equipment in combat. Experts have assessed the performance of individual equipments and their support arrangements. Generally the equipment and weapons systems performed well in especially demanding circumstances: well as, and sometimes better than, expected. The operational availability of equipment was impressive. In most cases the need was confirmed for improvements already planned. We discuss in the remainder of this section the performance of the main weapons platforms and the contribution of equipment in the rôles in which it was deployed.

Warships

218. Operations in support of an amphibious landing within range of enemy aircraft and without the assistance of airborne early warning (AEW) aircraft or land-based all-weather fighters inevitably risked ship losses. In addition to the four warships, one RFA and one merchant ship were lost; eight other warships and two RFAs suffered varying degrees of damage.¹ In most cases these ships continued to take part in operations, making good damage through the efforts of their crews aided by specialist teams. The carriers, HMS *Hermes*

Note:

¹ Details of ship and aircraft losses are given in Annex C.



()

and HMS *Invincible*, were effective and flexible command ships and provided good platforms for air operations. For example, on 1 May HMS *Hermes* tasked 12 Sea Harriers in attacks on Port Stanley and Goose Green, yet one hour after their return home the same aircraft were airborne for air defence patrols.

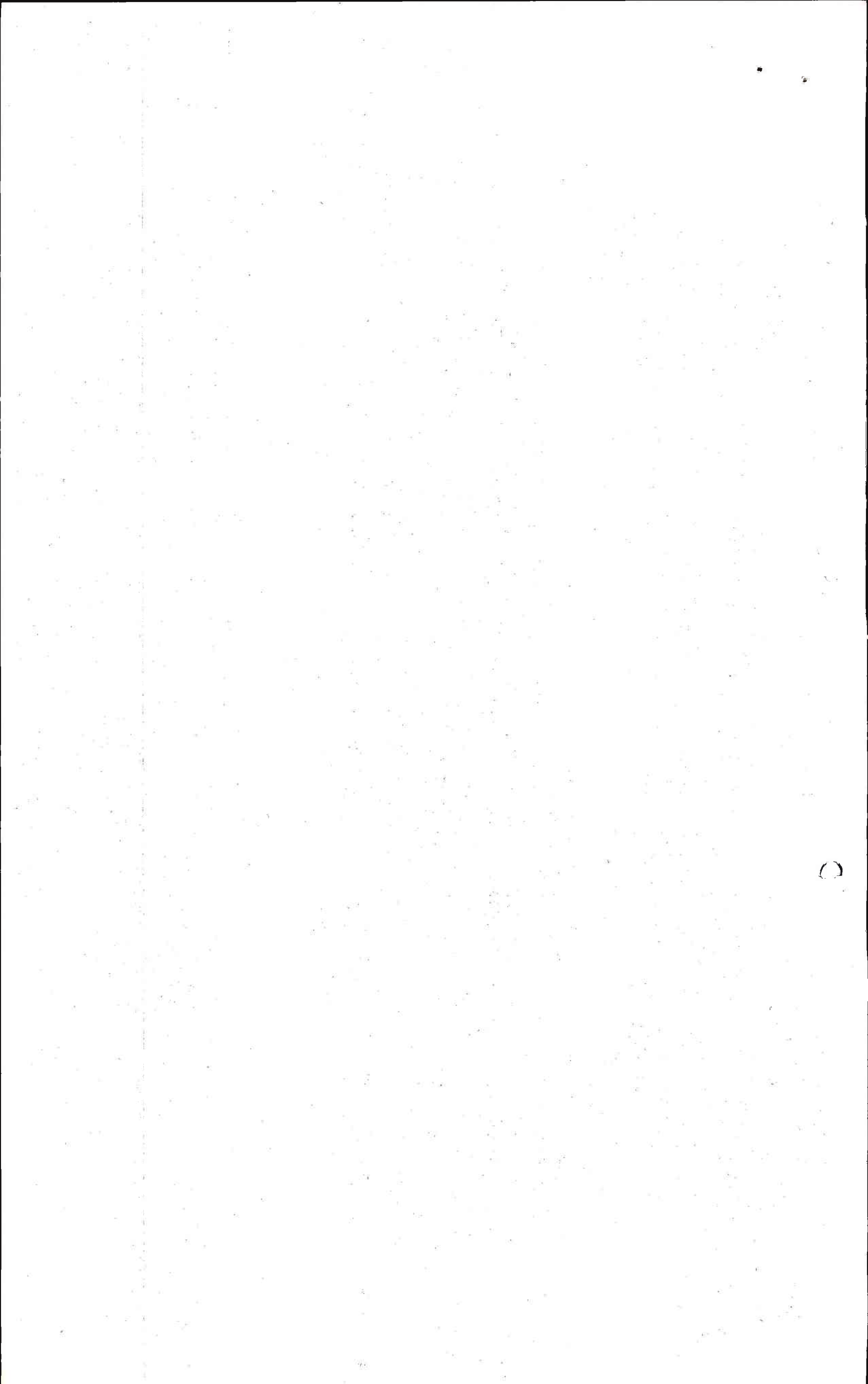
219. In our assessment of the lessons to be drawn for warship design it has had the benefit of a valuable independent review conducted by members of the Marine Technology Board of the Defence Scientific Advisory Council. It is clear that RN ships are strong and reliable platforms able to operate continuously at sea even in the most difficult weather conditions. No fundamental design defects have been identified.

220. There has been comment on the use of aluminium in the construction of ships. The facts are that aluminium was used in the superstructure of the Type 21 class of frigate and to a small extent in a few other classes, but not in the Type 42 destroyers, such as HMS *Sheffield*. In addition, aluminium was sometimes used for non-structural minor bulkheads, ladders and ventilation trunking. By use of aluminium it is possible to make significant savings in the weight of ships above the water-line, but it has been recognised that the metal loses strength in fires and therefore its extensive use in the construction of RN warships was discontinued several years ago. Nonetheless, there is evidence that it has contributed to the loss of any vessel.

221. Some important lessons have been learned about the rapid spread of fire and smoke in ships, and about the use of materials which can prove hazardous in fires. Cabling fitted in older ships can prove inflammable; this hazard will be greatly reduced in new ships. Urgent studies are now in hand aimed at improving the survivability of existing ships and incorporating lessons in future designs. Examples of measures which will be taken include improved fire zones; changes to the design of watertight doors and hatches; the provision of more escape hatches; making bulkheads more smoke-tight; the re-siting of fuel tanks; reductions in inflammable materials; and additional fire pump breathing apparatus and personal breathing sets.

Aircraft

222. *Harrier*. 28 Sea Harriers and 14 RAF Harrier GR3s were eventually deployed to the South Atlantic. Over 1,100 combat air patrol missions and 90 offensive support operations were flown by Sea Harriers and 125 ground attack and tactical reconnaissance sorties by Harrier GR3s. These aircraft were a major success, showing themselves to be flexible, robust, reliable and effective. Sea Harriers, which are intended largely for air defence, were also employed in the ground attack and reconnaissance rôles: the Harrier GR3s, primarily ground attack aircraft, were converted within a week to use Sidewinder AIM 9L air-to-air missiles in the air defence rôle. There was 99% availability at the beginning of each day and 99% of all planned missions were flown. Sea Harrier demonstrated itself to be more than a match for Argentine conventional fixed wing aircraft with 20 confirmed and 3 probable kills, of which 16 and 1 respectively are attributable to Sidewinder AIM 9L missiles. Six Sea Harriers were destroyed, of which two were lost to enemy fire—one to small-arms fire and one to a Roland surface-to-air missile. Three GR3s were also lost to enemy fire, all to ground gunfire. Most aircraft engaged in offensive



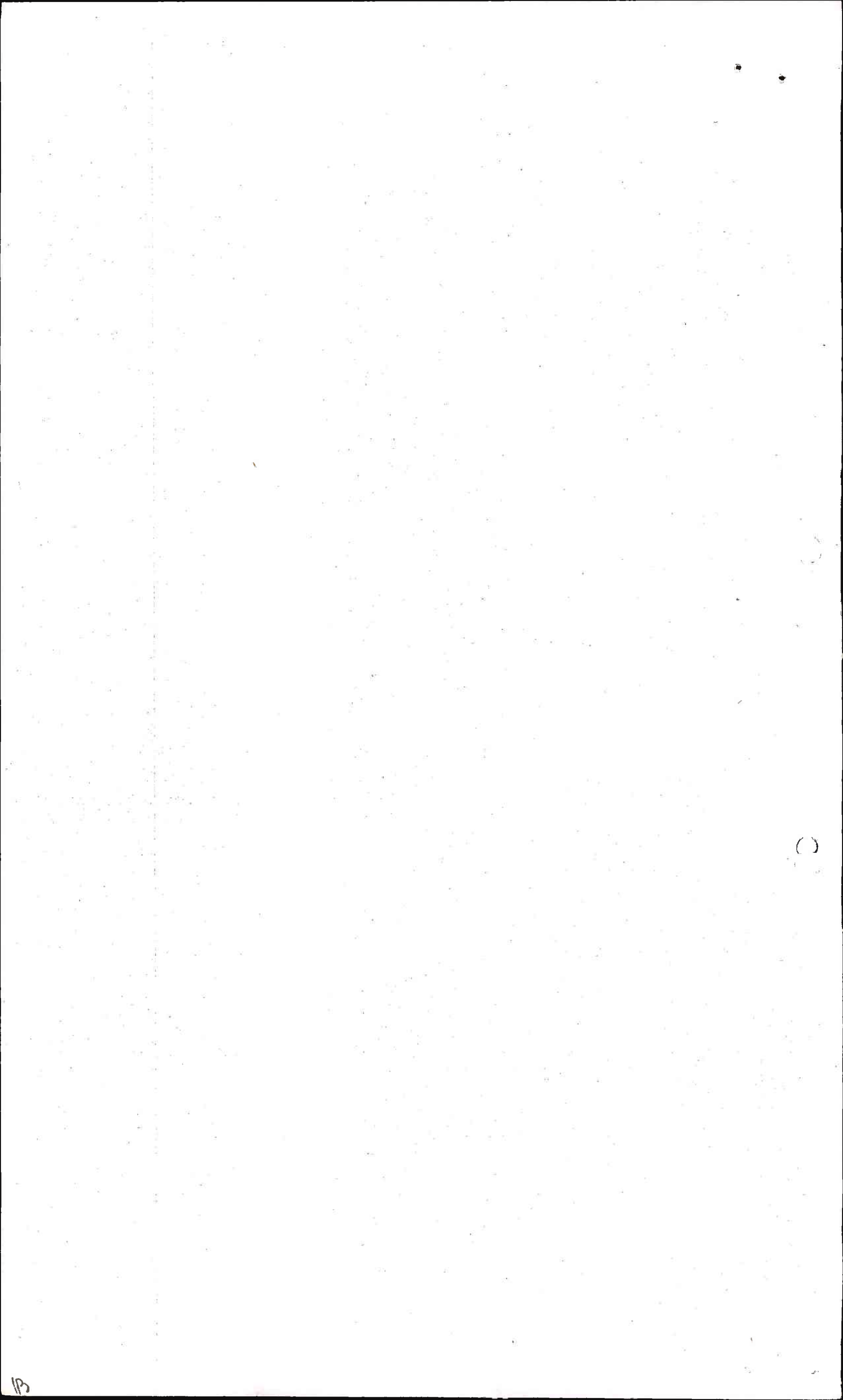
support survived damage, which usually resulted from intense Argentine aircraft gunfire. The need was demonstrated for certain improvements to Sea Harrier to provide greater endurance and weapon carrying capacity, a better radar. As a result, Sea Harriers, starting with those already deployed in HMS *Illustrious*, are being given greater endurance by the fit of larger oil tanks, and increased armament by the fit of four rather than two Sidewinder missiles. Improvements to the Sea Harrier's radar and radar warning receiver systems are planned.

223. *Nimrod*. The Nimrod maritime patrol aircraft was given a similar effective air-to-air refuelling capability and 16 aircraft have been modified in this way. This, with the addition of vision aids, improved navigation equipment, and a variety of weapons including Harpoon, Stingray and Sidewinder, has greatly enhanced its overall capability. A total of 34 Nimrods will eventually be modified to enable them to carry anti-shipping and air-to-air missiles. The Nimrods' Searchwater radar performed well, enabling crews to monitor shipping at long range, outside missile engagement zones of possible enemy warships. The full capability of this radar is still being developed and exploited.

224. *Helicopters*. Almost 200 helicopters of seven different types (Sea King, Wessex, Lynx, Gazelle, Wasp, Scout and Chinook) were deployed. After the loss of three Chinooks and six Wessex in the *Atlantic Conveyor*, there was a shortage of helicopters to support the ground forces even though a squadron of Sea King anti-submarine warfare (ASW) helicopters had been converted to the support rôle. A graphic illustration of the Chinook's capability was supplied by the single aircraft to survive the sinking of the *Atlantic Conveyor*; without spares and ground support it flew 109 hours in combat conditions, carrying up to 80 armed troops in a single lift. In addition, helicopters were also heavily committed in the ASW or anti-surface vessel warfare (ASVW) rôle, logistics, search and rescue, casualty evacuation and reconnaissance or support rôles. Naval helicopters operated at over three times peacetime rates. Lynx performed well and the Sea King Mk 4 with its large internal and external load-carrying capability was particularly useful. Of the Army helicopters, Gazelle is designed to be used predominantly as a reconnaissance and command-and-communications helicopter. Without offensive armament and in a country devoid of natural cover it proved vulnerable to ground fire and we are currently assessing ways of enhancing its battlefield survivability.

Air Defence

225. The battle for air superiority was vital to the success of the Campaign. In NATO operations in the Eastern Atlantic the Royal Navy would be supported by land-based aircraft and, when available, the carrier strength of the United States Navy. In the South Atlantic, the task force was faced with an efficient land-based air force of over 200 frontline aircraft, and its greatest handicaps were the shortage of fighter aircraft and the lack of AEW. Sea Harriers were outnumbered six to one. AEW aircraft could not be deployed at all. The task force relied on a mix of systems for air defence. These comprised electronic detection systems, fighter aircraft, ECM, medium and short-range missiles



()

medium-calibre guns and, finally, close-range point defence systems such as rapid-firing guns and hand-held missile launchers. These systems between them destroyed a confirmed total of 72 enemy aircraft and a further 14 probable. By the time of the final assault on Port Stanley the Argentine air force had been effectively neutralised as a fighting force. Our assessments of Argentine losses and of the performance of individual missile systems are shown in Annex B.

226. The value of the medium-range air defence missile, Sea Dart, was evident in the eight kills it achieved. The known capability of the system also deterred many attacks and forced the Argentine aircraft to fly at low altitude, which made them easier targets for other systems and often prevented their bombs from fuzing. There are areas in which the Sea Dart can be improved and these are either in hand or being studied.

227. Although designed primarily as a self-defence weapon against missiles, the capable Sea Wolf point defence system was used against low-level attacking aircraft. In this rôle it shot down five Argentine aircraft. No opportunity arose to use Sea Wolf against missiles. The flexibility of this system was shown by the speed with which its software was adapted to cope with low-level aircraft attacks. A package of improvements for Sea Wolf is already in hand.

228. As acknowledged above, the absence of AEW was a severe handicap against Argentine air attacks mounted at very low level, especially at San Carlos where the radars deployed suffered considerable interference from surrounding high land. The lack of AEW also proved an important limitation in the task force's ability to deal with the threat from Exocet by intercepting the aircraft carrying it before the missile could be launched. The difficulty of guaranteeing detection of low-flying aircraft made it prudent for the carrier to operate well to the east of the Falklands, which limited the patrol time of Sea Harriers. This shortcoming has now been remedied in part by the deployment in HMS *Illustrious* of two Sea King helicopters equipped with modified Searchwater radars, which taken with the deployment of Sea Harriers with greater endurance represents a major improvement in our carrier-borne air defence capability. Further steps to improve the AEW capability of the Fleet are discussed in Part 3. In addition the Nimrod AEW Mk 3 will be deployed in the Eastern Atlantic from 1984, following initial delivery towards the end of 1983. In the Falklands we now have new radars and RAF Phantom aircraft which, when on combat air patrol, can provide some early warning of low-level air attack.

229. The threat posed by the sea-skimming missile, Exocet, was well understood before the operation; and counter-measures to deal with it were available to the task force. Additional electronic and other measures were very quickly devised and deployed to the South Atlantic. For example, chaff was extensively and successfully used. For the future the improved Sea Wolf system already ordered will have an all-weather capability against low-level missiles, and several programmes are in hand to improve our ship-borne ECM capability. The provision of AEW will also enhance the ability of RN warships to deal with this threat.

230. Other areas for improvement which have been identified in the ship-borne air defence field include:—

- a. The need for a point defence weapon system for high value units. As an interim measure the American Vulcan-Phalanx gun-system has been mounted on HMS *Illustrious* and HMS *Invincible* and low-level air defence guns have been fitted to a number of other ships. Our plans for the future are described in paragraph 311f.
- b. The need for more realistic training. In particular all ships need to be fitted with a wide range of on-board trainers if the Royal Navy is to optimise the performance of its high technology systems. There is also the need for more realistic targets for the peacetime training of air defence weapon system operators.
- c. Ship-borne surveillance radars and command and weapon control systems. Various improvements are being urgently examined.

231. As to land-based air defence, Rapier performed well and had a major impact on the Campaign. It was employed only in the optical mode to provide land-based low-level air defence after the landings on 21 May. The conditions for the operation of Rapier were severe. The system had been exposed to the rigours of a long sea voyage and was without its second-line support. Enemy air attacks were generally prosecuted at below 100 feet, often in valleys shrouded by mist and in poor light. Nevertheless, it scored 14 confirmed and 6 probable kills. A series of improvements to the system's reliability and speed of reaction has already been developed and is being incorporated in Rapiers in the United Kingdom and Germany. We have also planned for some time to introduce later in the decade a further series of improvements to the missile, fuze, the radars and the capability of the system against multiple targets.

232. Blowpipe is a point defence missile system designed to be operated, and carried limited distances, by one man. In this campaign it was used extensively against fast-crossing targets for which it was not designed, and subjected to far rougher handling than it had been designed to withstand. Despite this it brought down nine enemy aircraft and a further two probables. Experience in the Campaign has confirmed the need for the series of improvements already in hand, which include enhancements to the missile warhead and motor and the introduction of an improved aiming unit and an alerting device. These improvements should be completed in stages over the next six years.

Anti-Surface Vessel Warfare

233. The strategic dominance of the SSN and its crucial part in the Campaign have already been described in paragraph 211. Apart from the sinking of the cruiser, *General Belgrano*, surface action was confined to engagements against patrol craft and small merchant vessels. The helicopter mounted air-to-surface guided weapon, Sea Skua, was deployed for the first time and performed excellently. It scored eight hits with eight firings, destroyed one patrol craft and seriously damaged two other Argentine ships. The 4.5" gun also proved to be accurate and effective in the anti-surface ship rôle.

Anti-Submarine Warfare

234. In the face of the threat from Argentine submarines, task force ships and aircraft carried out extensive anti-submarine operations. The ability to sustain

()

such operations was proved. The operations highlighted the difficulties of conducting ASW in shallow water. We have already planned a number of improvements in our ASW capability and will be examining what other measures are now required.

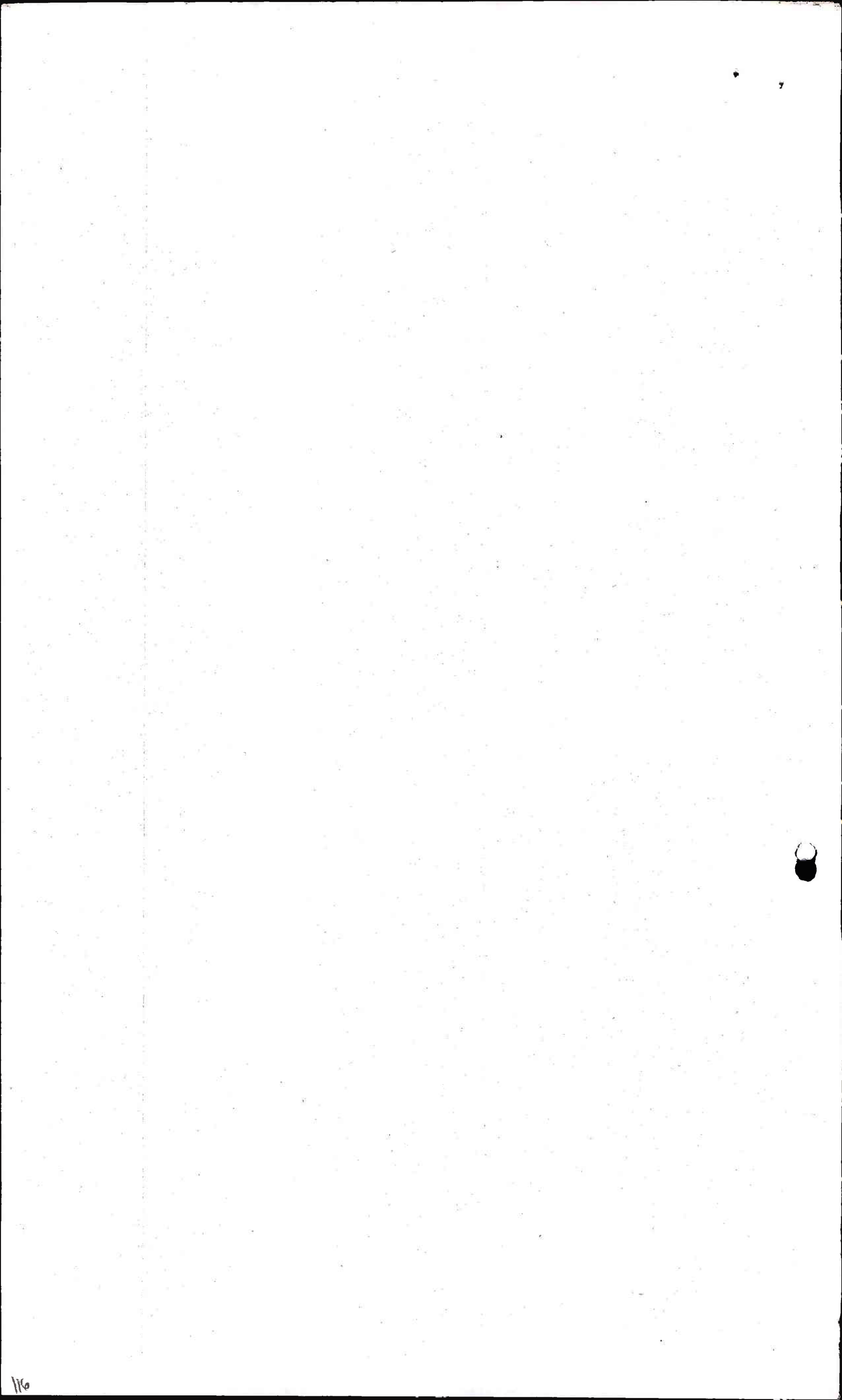
Land Warfare

235. In general the land forces found most of their equipment well able to withstand the rugged treatment it received on the Falklands. Of special interest were:—

- a. *Mobility.* The ground forces were heavily dependent on helicopters and tracked vehicles for mobility. The tracked combat reconnaissance vehicles, Scorpion and Scimitar, performed very well in boggy conditions, covering an average of 350 miles each. One vehicle withstood a shell which landed 14 metres away; another ran over a mine which severely damaged the vehicle but left the crew unharmed. The Combat Engineer Tractor was also an essential and effective vehicle on this demanding terrain. The extensive use of mines by the Argentine army was a notable problem. An assessment of the Army's ability to breach minefields rapidly had been set in hand before the Campaign.
- b. *Artillery and Naval Gunfire Support.* The main land-based artillery support for the ground forces was provided by the 105mm light gun which together with its ammunition was deployed mainly by helicopter. Its performance was excellent. The five batteries engaged fired nearly 17,500 rounds. Some guns fired as many as 500 rounds in 24 hours. Task force ships fired 8,000 rounds of ammunition in accurate Naval gunfire support attacks on ground targets.
- c. *Anti-Armour and Personal Weapons.* The self-loading rifles and general purpose machine guns proved effective small arms, notwithstanding that the weight of weapons and ammunition presented physical and logistic problems on such unfavourable terrain. These problems will be eased considerably by the new small arms which should enter service in the mid-1980s. The 81mm mortar proved versatile and effective. Although not used in their primary rôle, anti-armour weapons such as Milan were very effective against strong defensive positions.
- d. *Night Fighting.* A requirement was demonstrated for more night fighting equipment. Since the conflict we have placed orders for the procurement of general purpose night-vision goggles for the infantry and night-flying goggles for the Army Air Corps. Further purchases of both types are planned.
- e. *Combat Clothing.* In the exceptionally demanding conditions of the Falkland Islands winter a number of shortcomings were identified in clothing and personal equipment. Replacement of some of these items has already commenced.

Air-to-Ground Warfare

236. Although there was only limited opportunity to observe the effectiveness of our own land-based air power in combat conditions, several lessons emerged—both from our own operations and those of the Argentines—which are



important for future procurement policy. The most significant among them are:—

- a. *Attack on Airfields.* In the longest range bombing missions flown Vulcan bombers attacked Port Stanley airfield, but with 1000 lb bombs they were unable to close the runway for more than a short period. The need was underlined for an advanced air attack weapon such as JP 233.
- b. *Defence Suppression.* Although combat aircraft were quickly fitted with chaff and flare dispensers and some active ECM equipment, which proved vital in the event, the lack of defence suppression weapons to attack enemy radars exposed the Harriers to heavy and accurate ground fire. Vulcan attacks were made on radars close to Port Stanley with Shrike anti-radiation missiles, with some success; the procurement of anti-radiation missiles is included in our forward plans.
- c. *Close Air Support.* The Campaign exposed the limitations of the traditional method of forward air control of close air support operations. In the later stages laser target marking from the ground was used, enabling laser-guided bombs to make direct hits on their targets. In the future, tactical ground-air communications will be improved, and the effectiveness of laser target marking will be further explored.
- d. *Air Reconnaissance.* The absence of a dedicated overland air reconnaissance capability was a handicap in the Campaign, and the resulting lack of precise information on enemy dispositions presented an additional hazard to ground forces. We plan to improve our tactical reconnaissance capability.
- e. *Sea-Skimming Missiles.* The Campaign showed the potential of the launched, sea-skimming missile. We have already equipped a number of Nimrod aircraft with the Harpoon anti-ship missile and we will further improve our existing capability in this area by the acquisition of the advanced Sea Eagle missile, which has a longer range and more discriminating capability than Exocet.

Procurement and Improvisation

237. In the exceptional circumstances of the Campaign our procurement processes proved adaptable to meet the wide variety of military needs against very tight timescales. New operational demands were satisfied in record times through the ready availability of a broad spectrum of scientific and engineering expertise in the Ministry of Defence research establishments and the comprehensive resources of the United Kingdom's defence industry. The Campaign demonstrated the value of a broadly based national defence industry, and the benefits of an in-house research capability.

238. Those concerned at all levels in both Government and Industry worked hard to enhance our operational capabilities by specific threat assessment, computer modelling work; material and software modifications to equipment; rapid development of new equipment capabilities; and accelerated introduction of equipments into service. Examples included the development of important, often vital, equipments by combining existing items in new ways, such as

()

creation of AEW equipment using Nimrod Searchwater radars in Sea King helicopters (in only 11 weeks); the invention, production, proving and delivery in record time of many new equipments, including man-portable radar jammers (10 days from order to delivery); the accelerated introduction into service of HMS *Illustrious*, HMS *Brace* and weapons such as the Sea Skua anti-air missile; and the adaptation of Vulcan, Hercules and Nimrod aircraft for in-flight refuelling.

239. The urgency of the requirement frequently warranted the acceptance of lower engineering and safety standards; emergency arrangements worked well for the limited period of the operation. Overriding priority was given to the operation at all times and decisions were determined by what could be achieved in the time available.

240. The experience of the Campaign is being put to full use in the continuing quest for greater efficiency in the procurement process. It would be unrealistic to expect sweeping changes since the bulk of the emergency practices used were special to the operation and because equipment requirements were narrow to the immediate task of countering specifically known Argentine capabilities. Budgetary and cash limit restraints were removed although the principles of accountability and cost-effectiveness continued to apply.

Logistics and Personnel

241. A military operation of this scale required the specialised skills of many thousands of managers, engineers and technicians. They performed a multitude of rôles, particularly in the logistics field, which were essential to the success of the operation but which did not require detailed direction. As was to be expected they responded well to the need for speed of action in following well established procedures and for improvisation whenever this was likely to assist the operational commander.

242. The logistic support of the Falklands Campaign was a major success. Despite lines of communication which stretched half way round the world, the task force rarely lacked essential supplies, and equipment and spares were maintained at high levels of availability. The task force was equipped and despatched in a remarkably short time, reflecting the high state of readiness and training of all three Services. Four lessons stand out.

243. First rates of usage, particularly of ammunition, missiles, and anti-submarine weapons were higher than anticipated. Last year we announced plans to increase substantially war reserve stocks in order to improve staying power; scalings will be reviewed in the light of experience in the Falklands Campaign.

244. Second we need to consider the level of logistic support maintained for 'out of area' operations. Since the late 1960s there has been a steady reduction in the Services' capability to support large forces outside the NATO area. The demands of the task force were met, but only by giving it first call on resources and by using some stocks earmarked for NATO operations. The Services' logistic capability to support 'out of area' operations has to

considered in the light of the Government's overall policy for such operations and this is discussed in Part 3. We shall, however, review the size and composition of the special stockpile being created to support 'out of the box' land operations. We shall also consider whether logistic support could be organised as part of a flexible system able to support forces whether in or outside the NATO area.

245. Third, *air-to-air refuelling* is vital in supporting operations at long range. For example, RAF Harriers flew non-stop to the South Atlantic from Ascension Island with tanker support. In the operations from Ascension Island, the relatively small amount of fuel carried by the Victor tanker aircraft resulted in a large proportion of the available tanker force being used for each Vulcan, Nimrod and Hercules sortie. Large capacity strategic tanker aircraft are needed to provide greater operational flexibility in the future. Our proposal for this is discussed in paragraph 311c.

246. Finally the Campaign brought home the significant contribution which *civil resources can make to the nation's strength in a crisis*. This was discussed in the Statement on the Defence Estimates for 1982 (Cmd 8529). Our intention to review the use of national logistic and manpower resources in this area has now been given even greater impetus. The smooth and rapid implementation of existing contingency plans to use merchant shipping in support of the Armed Services was a major success story of the Campaign. Some 45 ships were taken up from trade, from passenger liners to trawlers. They provided support across the entire logistic spectrum. Tankers carried fuel for ships, aircraft and land forces. Liners, such as the *QE2* and *Camberra*, and ferries gave service as troop carriers. Cargo ships, such as the *Atlantic Conveyor*, carried helicopters, Harriers, heavy equipment and stores. Other vessels were taken up as hospital ships, repair ships or tugs. All these ships were manned by volunteer, civilian crews, supplemented by small Naval or RFA parties.

247. Amongst the more notable conversions made to merchantmen were:

- a. The fitting of flight decks, which were designed and constructed in a matter of days and subsequently stood up to extremes of weather. Whilst no substitute for operational flight decks, these temporary facilities were invaluable.
- b. The provision and fitting of equipment to all merchant ships to enable them to replenish at sea.
- c. The equipping of trawlers as minesweepers, which swept some enemy buoyant mines.
- d. The provision of additional communication, navigation and cryptographic equipment.
- e. The provision of shipboard water production plants.

248. Civil air carriers supplemented the efforts of the RAF Air Transport Force and between April and June transported more than 350 tons of freight, including helicopters, to Ascension Island.

249. The Dockyards, civilian ports, stores depots, marine services and staff in Government Departments, together with hundreds of industrial firms joined

(1)

and small, played a major part in despatching and sustaining the task force. All gave unstinted assistance, working long hours, including weekends and Bank holidays. British Rail and the road haulage firms reacted rapidly to move vast quantities of stores and equipment to the docks.

250. As a consequence of the Campaign we have decided that military use features should be incorporated in the replacement for *Atlantic Conveyor* involving principally a prefabricated helicopter flight deck. We also have the option to take up the ship for a period each year for exercises. For the long term a working party of the Shipping Defence Advisory Committee will examine ways in which merchant ships likely to be required in any future emergency might be designed, modified or equipped for possible use in support of the Armed Forces or for self-defence.

251. The manpower demands of the campaign were met almost entirely by regular forces, and there was no general recall of reservists. It was, however, necessary to effect a selective call-out of a small number of Naval reservists and to retain some Naval personnel who might otherwise have been due for leave. The call-out worked smoothly but the exercise indicated the need to examine the legislation on the recall of reservists. As we pointed out in Cmd 8529 the various categories of Reserves would play an essential part in any future war in the NATO area. Some enhancements to our capabilities have already been made, for example by the expansion of the Territorial Army, and other steps are being studied.

252. The outstanding feature of the medical and casualty evacuation system was the dedication of the doctors and medical staff both in the field and on board ship. Casualties were in surgery within six hours or less and, as a result of this and the skill of our medical teams, over 90% survived. Extensive use was made of helicopters and hospital ships. VC10s were used in an aero-medical rôle to return casualties speedily to the United Kingdom. There were some difficulties in the initial planning of medical support for the operation. These are being studied with a view to making the most effective and economical use of medical resources from all three Services in future operations.

253. The casualty reporting systems of all three Services were rapidly expanded for the operation. For example, the Royal Navy set up their own casualty coordination centre at HMS Nelson in Portsmouth. It collated information from the task force via Fleet Headquarters and passed it to casualty aid centres in Service locations. Families were able to telephone with ease and at the height of the operation thousands of calls were dealt with every day. Wherever possible, next of kin were informed before news of an incident was made public. This was done by personal visits in the case of death or serious injury. In some cases the expectation that news could reach the public from other sources, such as Argentine claims, led to an announcement before all next of kin had been told.

Note:

¹ In all 255 task force lives, Service and civilian, were lost in the operation. A further 777 were injured. In many cases these injuries were not serious and the men were quickly able to rejoin their units. Over 700 of the injured are now fully employed once more.

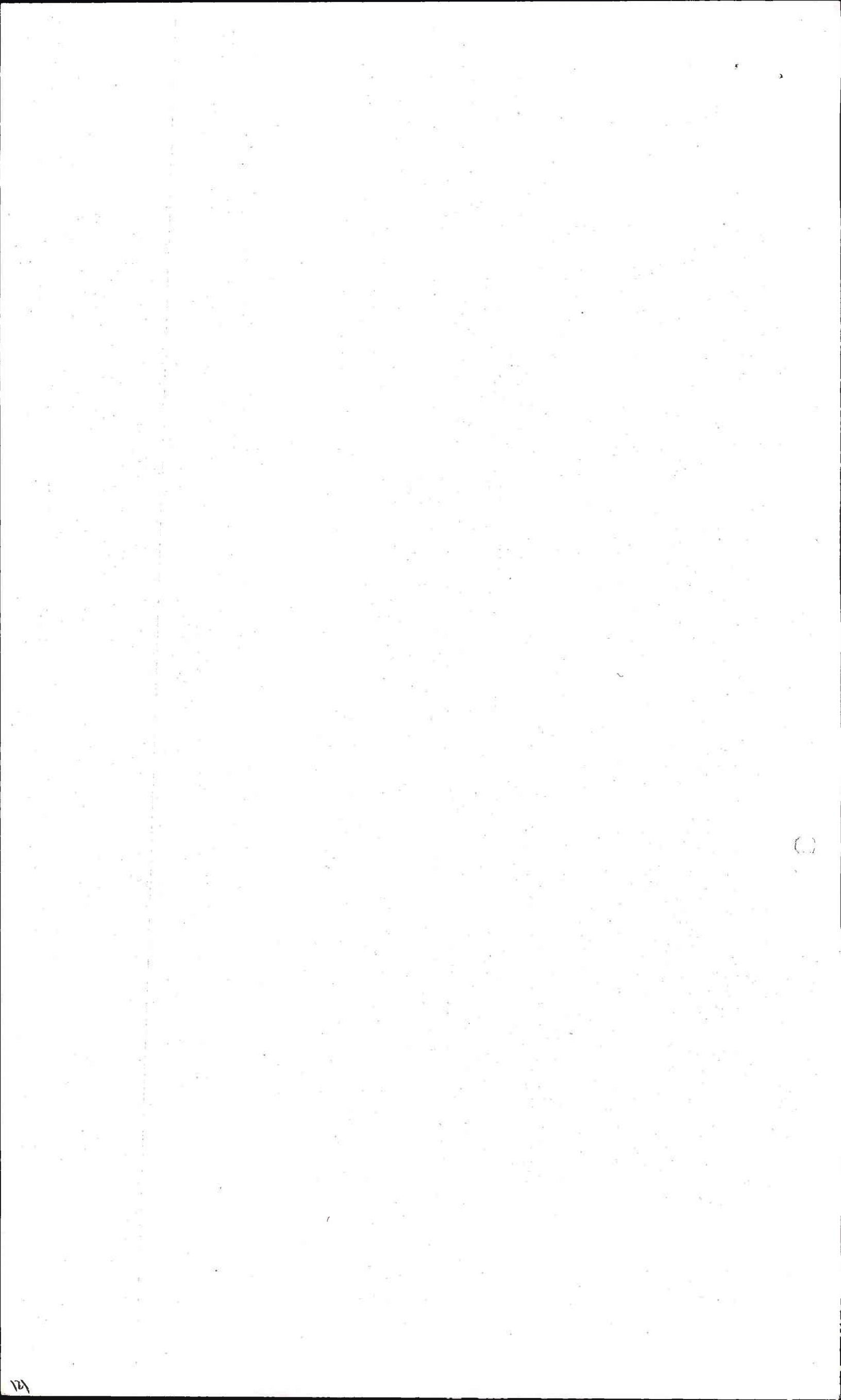
254. There were some errors and delays. It was difficult to establish the extent of casualties immediately after an incident at sea because of the constant helicopter transfer of personnel between ships, and the fact that survivors might be recovered by different means to different ships. It could take many hours to establish who was missing while other operations continued. Given these difficulties, the system worked as well as could be expected and improved during the operation.

255. By the end of the Campaign our forces had taken a total of 11,400 Argentine prisoners of war. The operational situation and the climate increased the considerable difficulties in handling so many prisoners—especially given the shortage of buildings on the Islands and the loss of tentage for 4,500 men in the *Atlantic Conveyor*. Nonetheless, all prisoners received adequate food, clothing and medical attention. The procedures laid down in the Third Geneva Convention were followed as closely as possible, although many prisoners had to be accommodated in ships. The International Committee of the Red Cross judged this unusual step reasonable in the circumstances. The problems raised by handling prisoners of war will be given more emphasis in training and planning in future.

Public Relations

256. The Government's firm objective from the outset was to provide as quickly as possible accurate information on developments in the diplomatic and military fields. In addition to the frequent reports which Ministers made to Parliament, No 10 Downing Street Press Office, the Ministry of Defence and the Foreign and Commonwealth Office provided regular briefings for the British and international press and for defence attachés. Abroad, our diplomatic missions, with the help of the Central Office of Information, launched and maintained an intensive effort with their local media to present the British case fully and accurately and, where necessary, to counter Argentine disinformation. At the same time they kept other Governments informed of the latest developments, canvassing support both in foreign capitals and at the United Nations. Arrangements were also made to convey a sizeable British press corps to the South Atlantic.

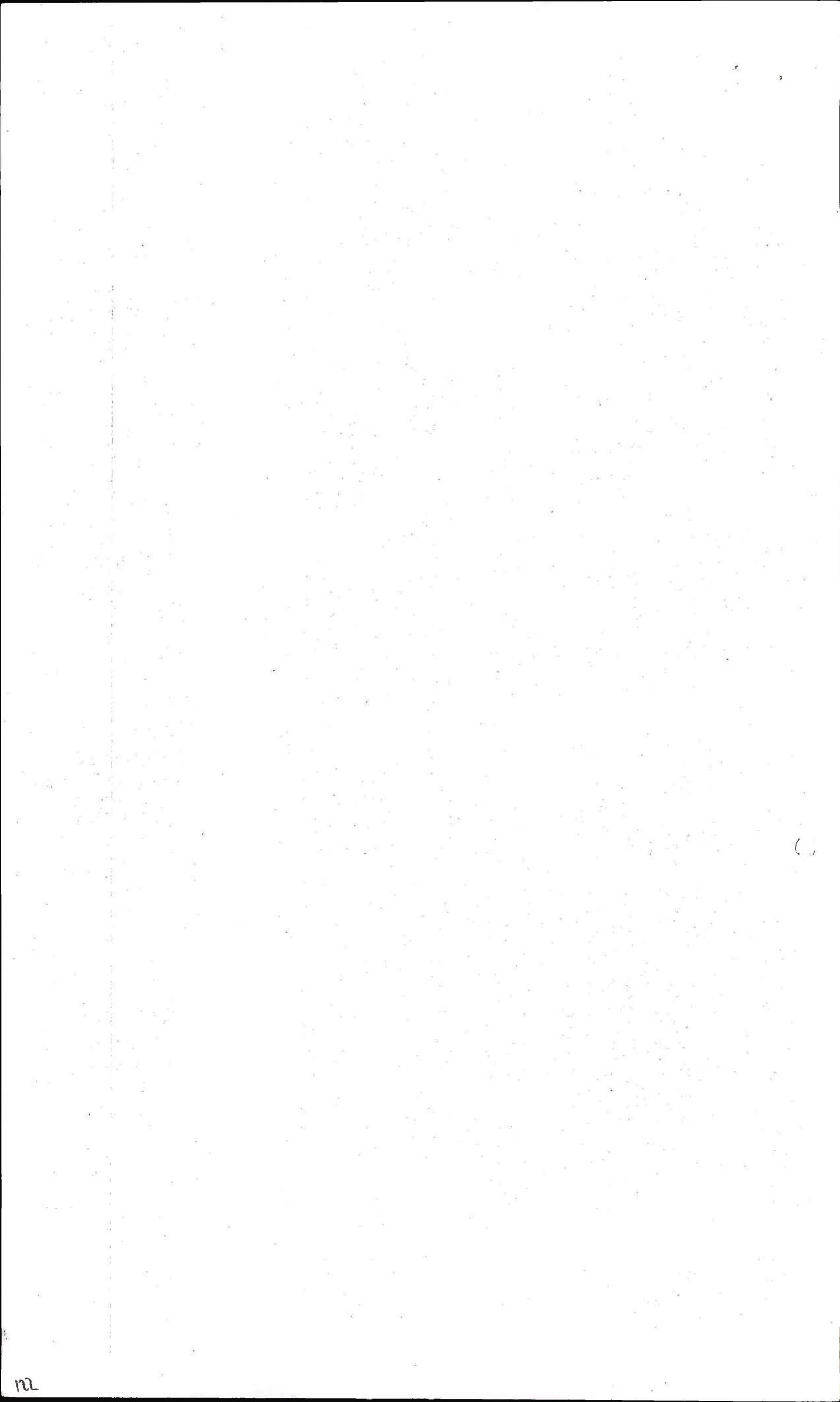
257. It was crucial that public opinion, both at home and abroad, understood and supported our cause. Without the support of the British people it would not have been possible to mount and sustain the operation. It was vital to retain the support of friends and Allies abroad. That this was largely achieved is a measure of our success in providing a reliable account of the diplomatic and military developments. Of course there were problems. The need to delay or, in some cases, prevent altogether the publication of certain information on military operations caused considerable controversy at the time and continues to be the subject of widespread debate. It is easy to overlook the factors influencing the public release of certain categories of information. At all times our practice had to be consistent with the overriding dictates of national and operational security and the protection of the lives of the men and women of the task force in the South Atlantic. At the same time, we were



(2)

concerned to ensure that as far as possible their families were caused the minimum of distress. Regrettably, press speculation and false Argentine propaganda sometimes obliged us to release information about the operation soon than family considerations would otherwise have dictated. Another factor contributing to our difficulties was the absence on some occasions of sufficiently detailed and up to date situation reports from the task force. To some extent this can be attributed to the limitations imposed by our communication systems, which did not always have the capacity to meet the requirements of the press on top of the vast flow of vitally important operational traffic.

258. These matters deserve careful and considered analysis. The Ministry of Defence has therefore commissioned a wide-ranging study by University College, Cardiff into the relationship between the media and the Government in a time of armed conflict. In addition, the House of Commons Defence Committee is currently conducting an extensive inquiry into the way in which these matters were handled during the crisis and we shall wish to take its report into account in our analysis. Meanwhile, a number of practical improvements are being made in the light of the Falklands experience, including new arrangements for accrediting journalists to military units and more extensive training opportunities for public relations officers. The Ministry of Defence is also discussing with the press the extent to which the difficulties which arose could be avoided in future. A special working party will be set up to consider whether any new measures, including the introduction of a system of censorship, are necessary in order to protect military information immediately before or during an operation.



Part 3

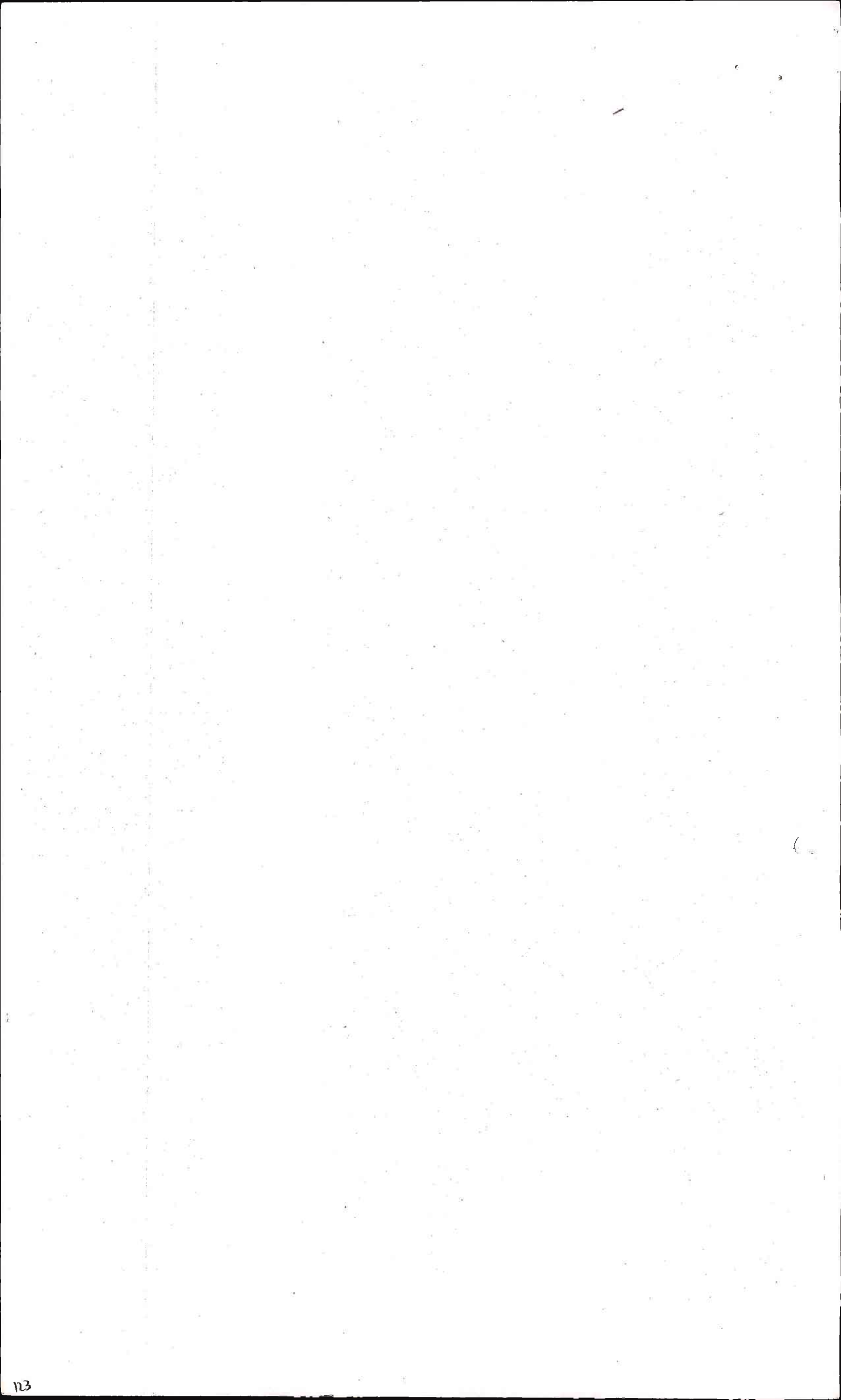
The Future

301. We have learned a great deal from the Falklands Campaign. Many of the lessons are not new but they are no less important for that. We have seen again the value of professional, well-motivated forces capable of responding quickly and imaginatively to the unexpected. The Armed Forces have demonstrated their capability to operate out of the NATO area in the most difficult circumstances and on the other side of the world; and they have gained direct experience of such an operation and the logistic effort necessary to support it. We now intend to introduce new and additional equipments to increase the mobility, flexibility and readiness for operations within the NATO area and elsewhere.

302. This is not to say that we now take a different view of the major threats to the security of the United Kingdom, which comes from the Soviet Union and its Warsaw Pact allies. The remorseless growth in the size and sophistication of the Soviet armed forces, and the disposition of Soviet leaders to exploit their military power for political purposes—directly or indirectly—continues unabated. It is still in Europe that we and our Allies face the greatest concentration of Warsaw Pact forces. In *The Way Forward* (Cmd 3288) I identified the four main rôles in which the Armed Forces help to counter this threat: providing an independent element of strategic and theatre nuclear forces committed to the Alliance; defending the United Kingdom homeland; a major land and air contribution on the European mainland; and deploying a major maritime capability in the Eastern Atlantic and Channel. These rôles remain the priority for our defence effort—and the enhancement and modernisation of the forces devoted to these tasks must still have the first call on our resources.

303. *The Way Forward*, however, also drew attention to the significance of threats posed to Western interests outside the NATO area. In countering these threats, our military effort plays a part at three levels:—

- a. Military assistance and training to countries of importance to Western interests which request our help. (This year we have military training teams varying in size from one man to more than 150 in some countries; and in the year ending April 1982 we trained almost 10,000 students from non-NATO countries at defence establishments in our country.)
- b. Periodic deployment of British forces, for example Naval task groups, to demonstrate a presence; to acquire experience of conditions from the European theatre; and to exercise with the forces of our Allies and friends.



real terms by which the defence budget is planned to grow annually over the period until 1985/86. These developments mean that we can now finance significant force enhancements over the next few years.

307. We have already announced that:

- following our experience in the Falklands, we intend that two carriers should be available for deployment at short notice. To ensure this a third carrier will be maintained in refit or reserve and we shall not proceed with the sale of HMS *Invincible*.
- restrictions on Armed Forces' training and activity levels have been lifted. This will help to maintain the high standards of professionalism and fitness demonstrated by all three Services during the conflict.

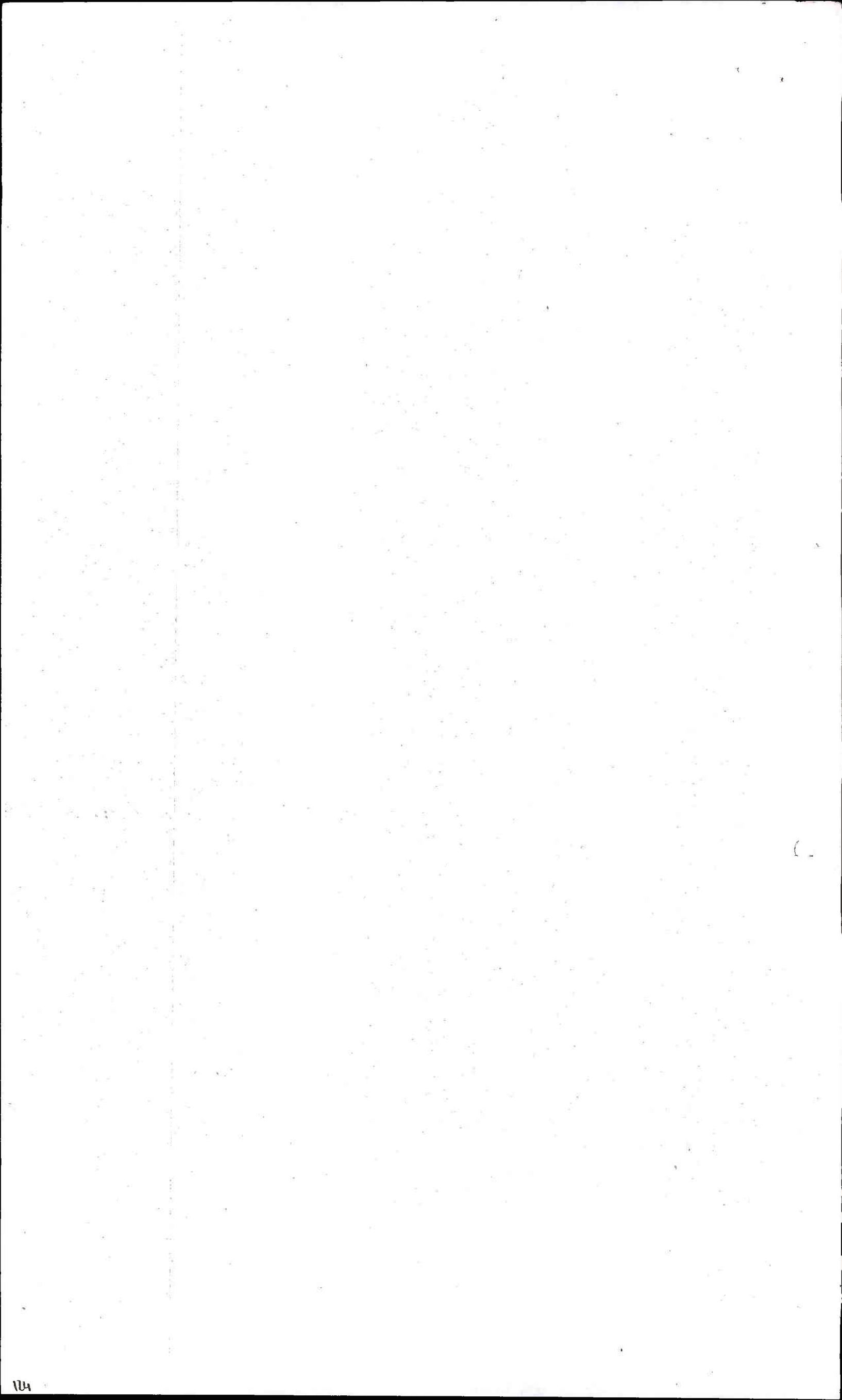
308. During the conflict a great variety of equipments and improvements were specially introduced for the forces involved in the operation, exceeding £200 million in value and including:—

- a. The equipping of Vulcan, Nimrod and Hercules aircraft for the air-to-air refuelling receiver rôle, and the conversion of Vulcan and Hercules aircraft to the tanker rôle.
- b. The modification of Nimrod aircraft to carry bombs, the Harpoon anti-ship missile, and Sidewinder AIM 9L air-to-air missiles.
- c. The purchase of additional Sidewinder AIM 9L missiles for Harrier and conversion of RAF Harrier GR3 aircraft to carry them.
- d. The introduction of laser-guided bombs for RAF Harrier GR3 aircraft.
- e. The adaptation of the Sea Wolf ship-borne missile system more effectively to deal with low-level aircraft attacks.
- f. The fitting of a close-in weapon system to HMS *Illustrious*.
- g. The accelerated introduction into service of the Sea Skua anti-ship missile and Sub-Harpoon submarine-launched anti-ship missiles.
- h. The further development of ship-borne chaff and electronic counter measures to deal with sea-skimming missiles; and development of chaff and ECM for tactical aircraft and helicopters.

Most of this equipment remains available for use by the Services, whether in the South Atlantic or elsewhere.

309. The replacement of ships and other equipment lost in the Campaign enhance the capabilities of the Services, since replacements will be newer and in many cases more capable than their predecessors; the major orders are for:

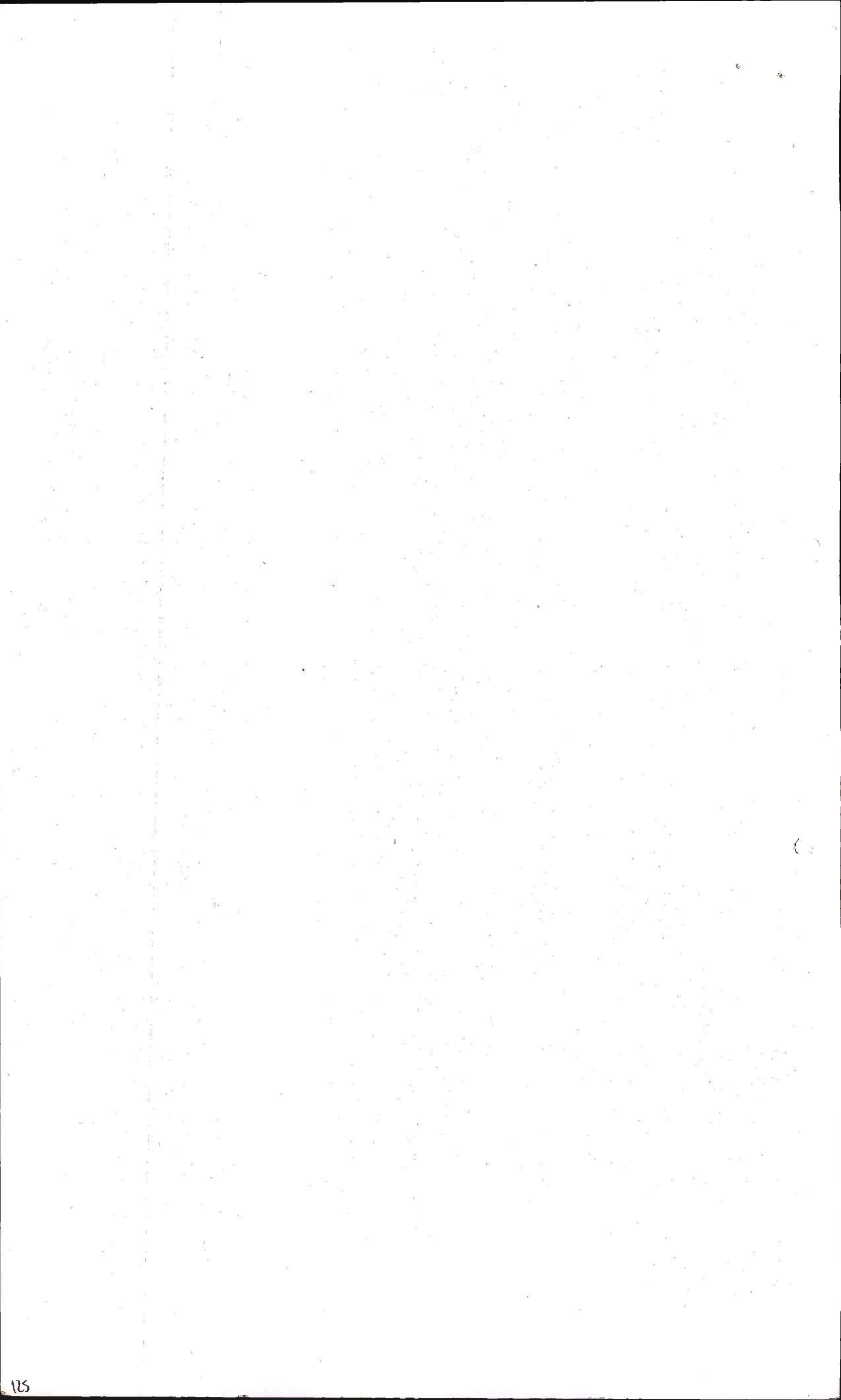
- a. Replacement of the two Type 42 destroyers and two Type 21 frigates. Five Type 22 frigates will be ordered, of which one has already been announced and is not related to the Falklands losses. Three of these ships will be of the new Batch III design equipped with the 4.5 inch gun and with added point defence capability.
- b. A replacement for the logistic landing ship, RFA *Sir Galahad*. Design work on the new ship is in hand and we expect to place an order during 1983. RFA *Sir Tristram* is to be brought back to the United Kingdom and we hope that it can be repaired.
- c. The replacement of all lost Harrier aircraft and Sea King, Lynx and Chinook helicopters. (See also paragraph 311 below.)



310. We shall maintain a sizeable garrison on the Falkland Islands for the foreseeable future including air defence radars, RAF Phantom, Harrier and Hercules aircraft, Chinook and Sea King helicopters, Rapier air defence systems, an infantry battalion, and supporting arms. Nuclear-powered submarines, destroyers, frigates, Sea King helicopters and patrol craft, with afloat support, will be deployed in the South Atlantic; and the ice patrol ship, HMS *Endurance*, will be retained for service there. These forces can be reinforced as necessary by others already identified for this purpose and we shall periodically mount exercises to test our reinforcement capability. This will be significantly enhanced by the further improvements outlined below.

311. In the light of the conflict and in order to provide for the defence of the Falkland Islands without a major diversion of effort from the Armed Forces' primary NATO roles, we intend—with the funds now available—to make a number of further additions and improvements to the Armed Forces. These measures will increase our total force levels, though those forces based in the Falkland Islands will be at a lower state of readiness for NATO than when in the European theatre. The main enhancements to be made are:—

- a. The purchase of wide-bodied tankers which will considerably enhance the capacity of the Royal Air Force's tanker force and will be a significant force multiplier for all the Royal Air Force's combat aircraft. Additionally, they will greatly enhance the Armed Forces' strategic mobility given their capacity also to carry large numbers of troops and heavy equipment, both for operations in Europe and elsewhere. They will transform our ability to support the Falkland Islands garrison, and to reinforce it quickly.
- b. The purchase of at least 12 Phantom F-4 J aircraft (subject to the satisfactory completion of negotiations currently in train) which will form a squadron for the air defence of the United Kingdom to replace the squadron of Phantom FGR2 aircraft committed to the South Atlantic. The deployment between theatres of this increased total Phantom force will be adjusted as and when necessary and can be quickly accomplished. For example, two Phantoms could be moved from Ascension Island to the Falkland Islands supported by a single wide-bodied tanker.
- c. The purchase of 24 additional Rapier fire units for the Army and the Royal Air Force.
- d. The purchase of five more Chinook medium-lift helicopters in addition to the three replacements already referred to. Each has the ability to lift up to 80 men and adds greatly to the mobility of our land forces; their value was clearly demonstrated by the contribution made by the single Chinook helicopter which was available in the Campaign.
- e. An increase in the previously planned number of front-line destroyers and frigates. Under these plans up to four ships would have been placed in the standby squadron by 1985. We have now decided in view of the Falklands commitment that all these destroyers and frigates should for some time yet be retained in the running Fleet. We have also taken steps to run on ships to offset the battle losses and front-line numbers will be about 55 at 1 April 1983 and 1984.



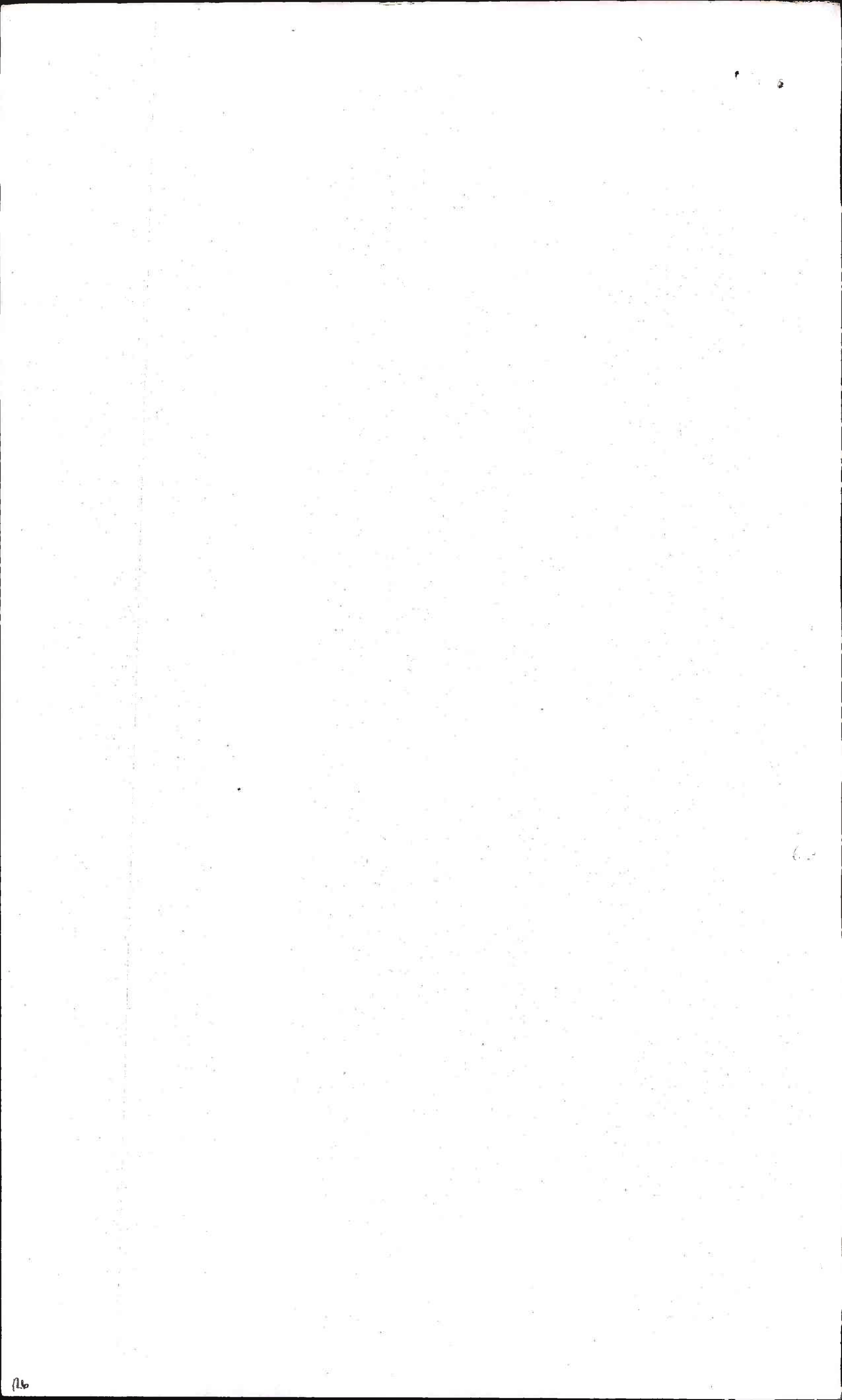
- f. The provision of point defence for the carriers HMS *Invincible* and HMS *Ark Royal*, the assault ships HMS *Intrepid* and *Fearless*, the destroyer HMS *Bristol* and all the Type 42 destroyers.
- g. In addition to replacement of all the battle losses, the purchase of six Sea Harrier aircraft and six Sea King ASW helicopters, as announced in July.
- h. The purchase of Searchwater radar and associated avionics equipment for Sea King helicopters in order to equip each of the operational carriers with an organic AEW capability.
- i. In the light of rates of consumption during the Falklands Campaign both of ammunition and stores, we are reviewing the size and composition of the stockpile intended to support operations outside the NATO area, and its relationship to NATO war stocks. We plan to increase substantially the number and range of items in this stockpile at a cost of at least £10 million. Additional stocks of ammunition and other equipments are being procured for basing in the Falkland Islands.

312. As indicated in Part 2 there is a case for a number of other force equipment enhancements in the light of the Falklands Campaign. Many of these, for instance more modern radar systems for our ships, extra night vision equipment for the Army and the JP 233 airfield denial weapon for the Royal Air Force, are already provided for in our forward programmes; others are not. The scope for further improvements in our forces will be assessed against available resources in the normal annual recosting of the defence programme as a whole, which will be completed during the early part of 1983.

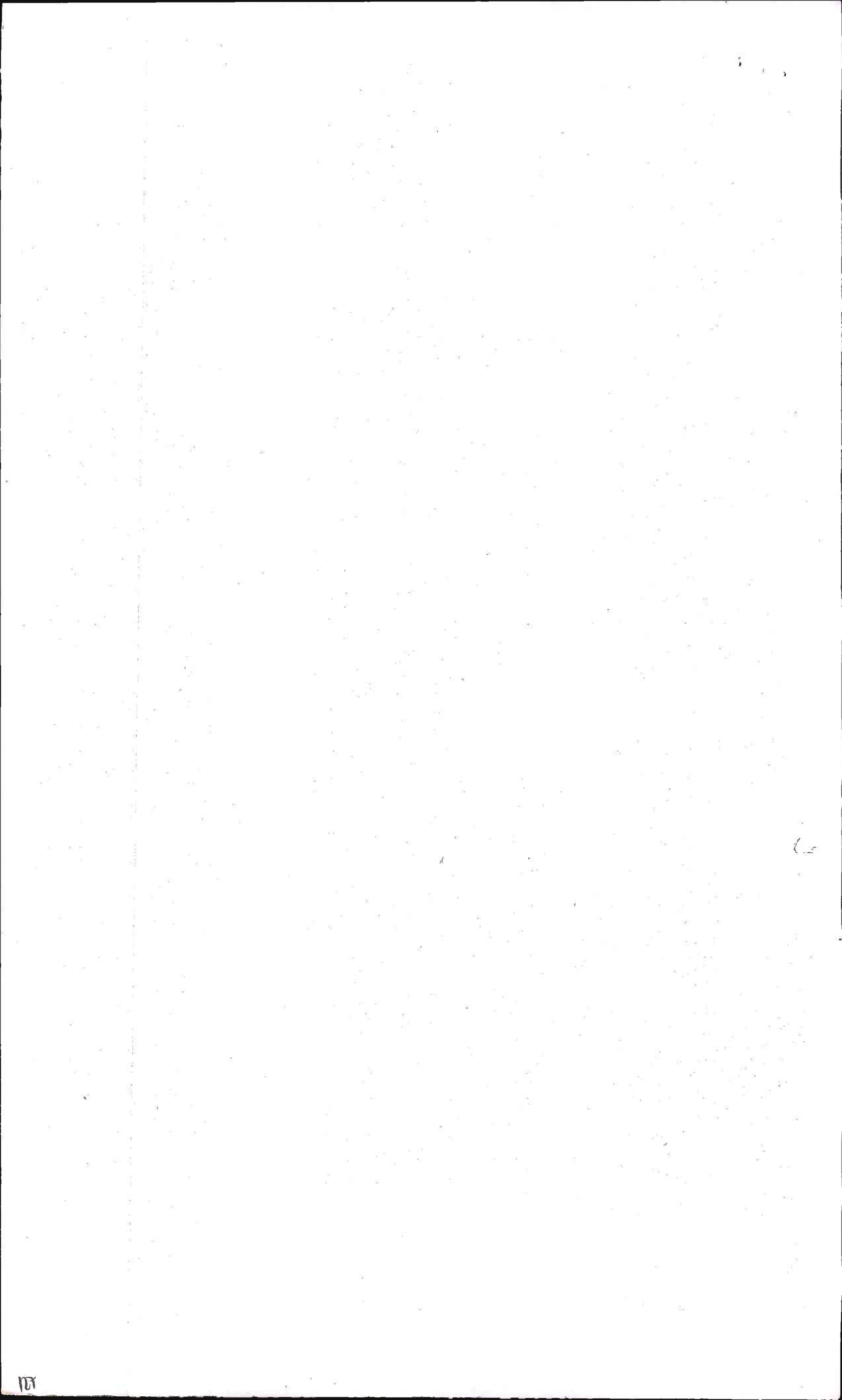
Conclusion

313. The many useful lessons we have learned from the Falklands Campaign which are described in some detail in this White Paper, do not invalidate the policy we have adopted following last year's defence programme review. The Soviet Union — its policies and its military capabilities — continues to pose the main threat to the security of the United Kingdom and our response to this threat must have the first call on our resources. Following the Falklands Campaign, we shall now be devoting substantially more resources to defence than had been previously planned. In allocating these, we shall be taking measures which will strengthen our general defence capability by increasing the flexibility, mobility and readiness of all three Services for operational support of NATO and elsewhere.

314. Above all, the success of the Falklands Campaign demonstrated conclusively the superb quality and commitment of British Servicemen. It showed the crucial rôle of the Merchant Navy, of civil servants on Royal Fleet Auxiliary ships, in the dockyards and elsewhere, and of British industry, of whom gave tireless and unstinting support to the task force. The quality and reliability of much Service equipment was proved, as was the ingenuity



and capacity for improvisation of the Services, defence establishments, and British industry. Finally, the Campaign confirmed that the British people and their Government have the will and resolve to resist aggression and the fortitude to withstand setbacks and casualties. We and our NATO Allies can draw confidence from this: the deterrent posture of the NATO Alliance as a whole has been strengthened.



Annex A

Composition of the Task Force and Supporting Elements

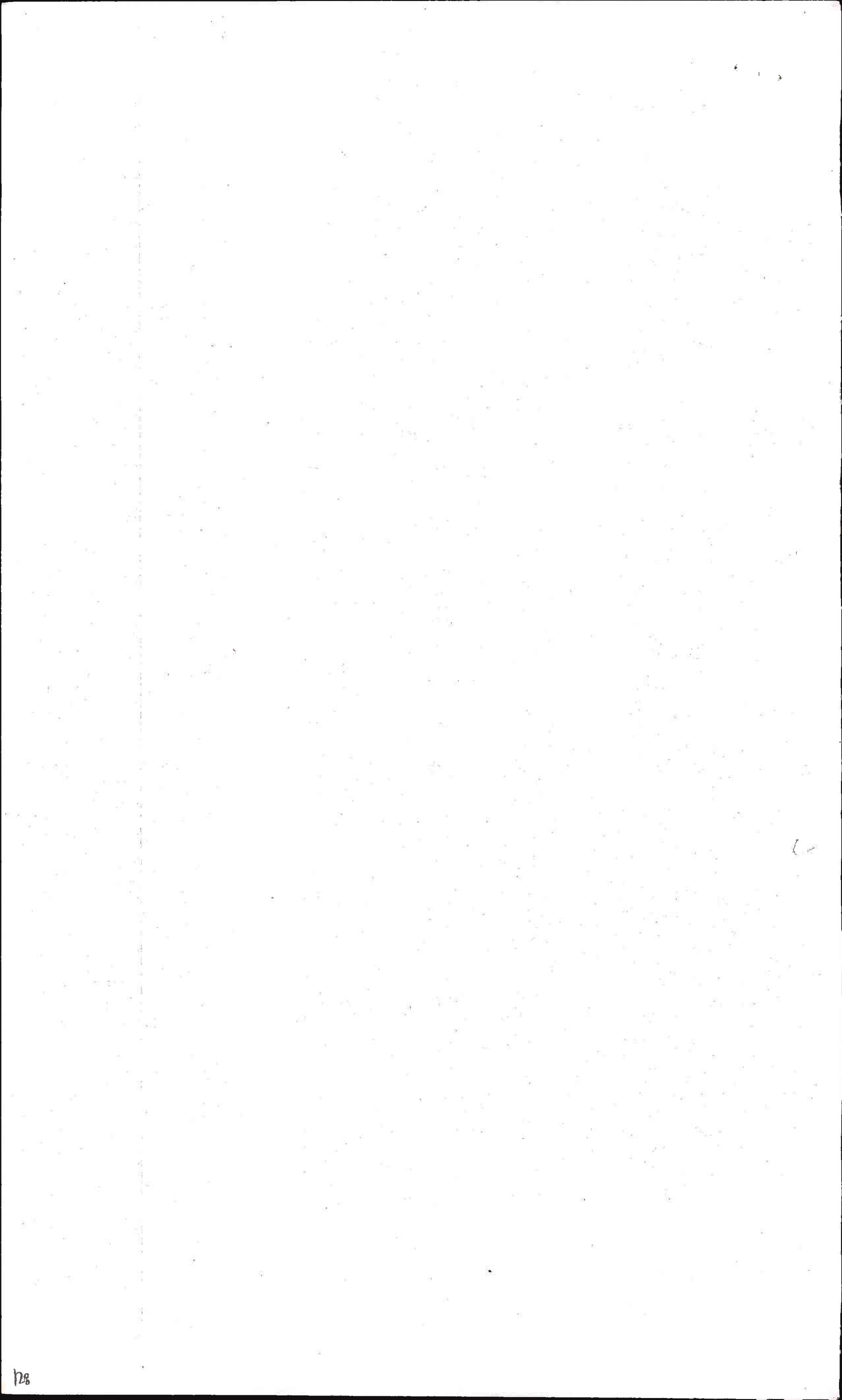
1. Ships of the Royal Navy

Serial	Type/Class	No	Ship
1.	Submarines: Fleet	5	<i>Conqueror, Courageous, Spartan, Splendid, Valiant</i>
	Oberon Class	1	<i>Onyx</i>
2.	ASW Carrier:	1	<i>Invincible</i>
3.	ASW/Commando Carrier:	1	<i>Hermes</i>
4.	Assault Ships:	2	<i>Fearless, Intrepid</i>
5.	Guided Missile Destroyers: County Class	2	<i>Antrim, Glamorgan</i>
	Type 82	1	<i>Bristol</i>
	Type 42	5	<i>Cardiff, Coventry, Exeter, Glasgow, Sheffield</i>
6.	General Purpose Frigates: Leander Class	4	<i>Andromeda, Argonaut, Minerva, Penelope</i>
	Rothsary Class	2	<i>Plymouth, Yarmouth</i>
	Type 21	7	<i>Active, Alacrity, Ambuscade, Antelope, Ardent, Arrow, Avenger</i>
	Type 22	2	<i>Brilliant, Broadsword</i>
7.	Offshore Patrol: Castle Class	2	<i>Dumbarton Castle, Leeds Castle</i>
8.	Mine Counter-Measures: Extra Deep Armed Team Sweep Trawlers ¹	5	<i>Cordelia, Farnella, Junella, Northella, Pic</i>
9.	Ice Patrol Ship:	1	<i>Endurance</i>
10.	Survey Ships ² :	3	<i>Hecla, Herald, Hydra</i>

Notes:

¹ Taken up from trade, commissioned and manned by RN personnel.

² Employed as ambulance ships.



2. Squadrons of the Fleet Air Arm

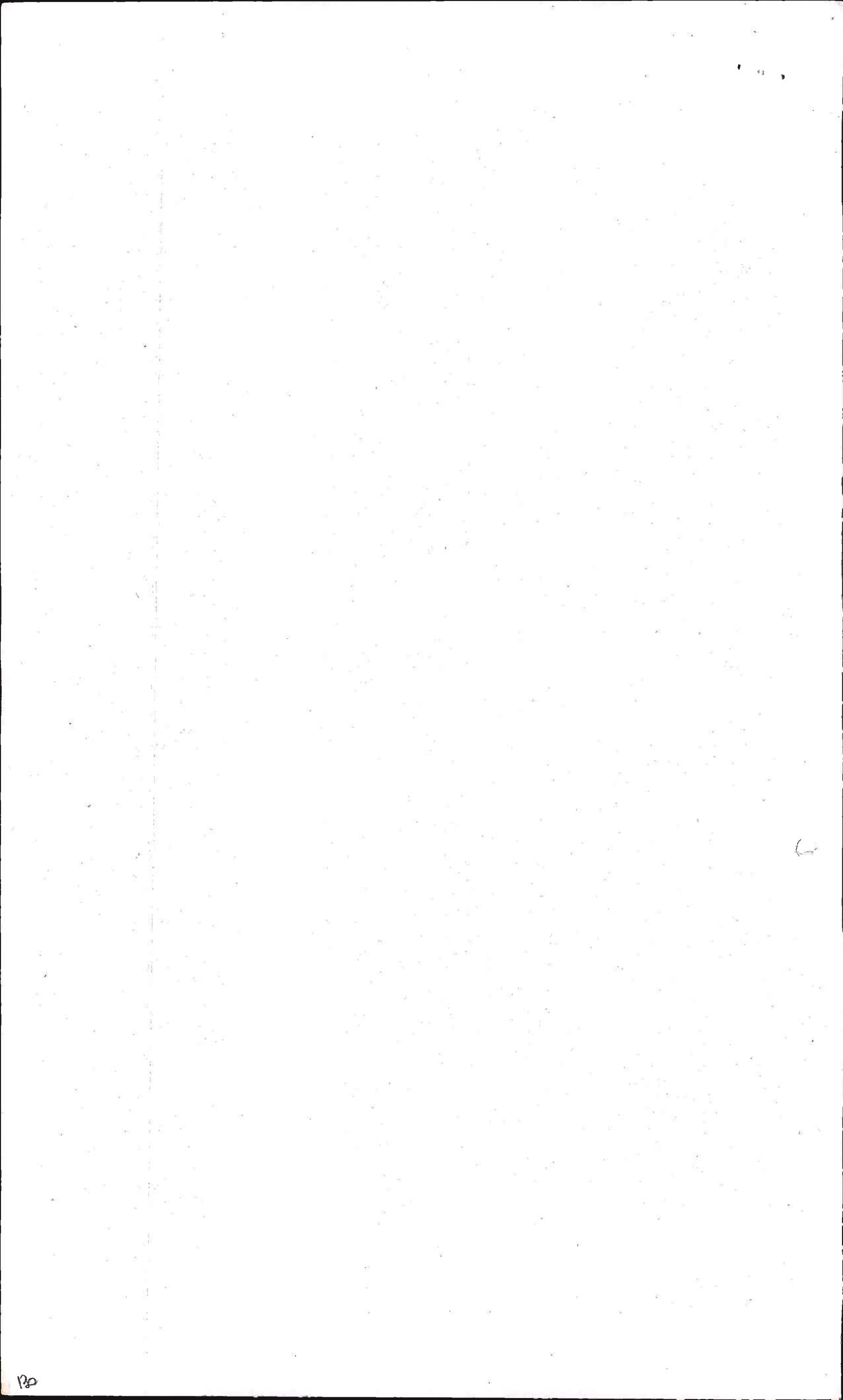
Serial	Sqdn	Aircraft	Embarked in:
1.	737	Wessex Mk 3	Counsey Class destroyers
2.	800	Sea Harrier	<i>Hermes</i>
3.	801	Sea Harrier	<i>Invincible</i>
4.	809	Sea Harrier	<i>Hermes, Invincible</i>
5.	899	Sea Harrier	<i>Hermes, Invincible</i>
6.	815	Lynx Mk 2	<i>Invincible, Hermes, Type 42 destroyers, Leander Class, Type 21 (except Active) and Type 22 frigates</i>
7.	820	Sea King Mk 5	<i>Invincible</i>
8.	824	Sea King Mk 2	<i>For: Grange, Olmeda</i>
9.	825	Sea King Mk 2	<i>Atlantic Causeway, QE2</i>
10.	826	Sea King Mk 5	<i>Hermes, Fort Austin</i>
11.	829	Wasp	<i>Active, Endurance, Plymouth, Yarmouth, Survey ships, Contender Berant</i>
12.	845	Wessex Mk 5	<i>Invincible, Fort Austin, Intrepid, Resource, Tidpool, Tigerpring</i>
13.	846	Sea King Mk 4	<i>Hermes, Fearless, Intrepid, Canberra, Elk</i>
14.	847	Wessex Mk 5	<i>Engadine, Atlantic Causeway</i>
15.	848	Wessex Mk 5	<i>Olna, Regent, Atlantic Conveyor</i>

3. Ships of the Royal Maritime Auxiliary Service

Serial	Type/Class	No	Ship
1.	Mooring and Salvage Vessel	1	<i>Goosander</i>
2.	Tug	1	<i>Typhoon</i>

4. Ships of the Royal Fleet Auxiliary

Serial	Type/Class	No	Ship
1.	Fleet Tankers, Large:	4	<i>Olmeda, Olma, Tidepool, Tidesp</i>
2.	Fleet Tankers, Small:	1	<i>Blue Rover</i>
3.	Support Tankers:	5	<i>Appleleaf, Bayleaf, Brambleleaf, Pearleaf, Plumleaf</i>
4.	Fleet Replenishment Ships:	4	<i>Fort Austin, Fort Grange, Recon, Regent</i>
5.	Stores Support Ship:	1	<i>Stromness</i>
6.	Helicopter Support Ship:	1	<i>Engadine</i>
7.	Landing Ships, Logistic:	6	<i>Sir Bedivere, Sir Galahad, Sir Geraint, Sir Lancelot, Sir Percivale, Sir Tristram</i>

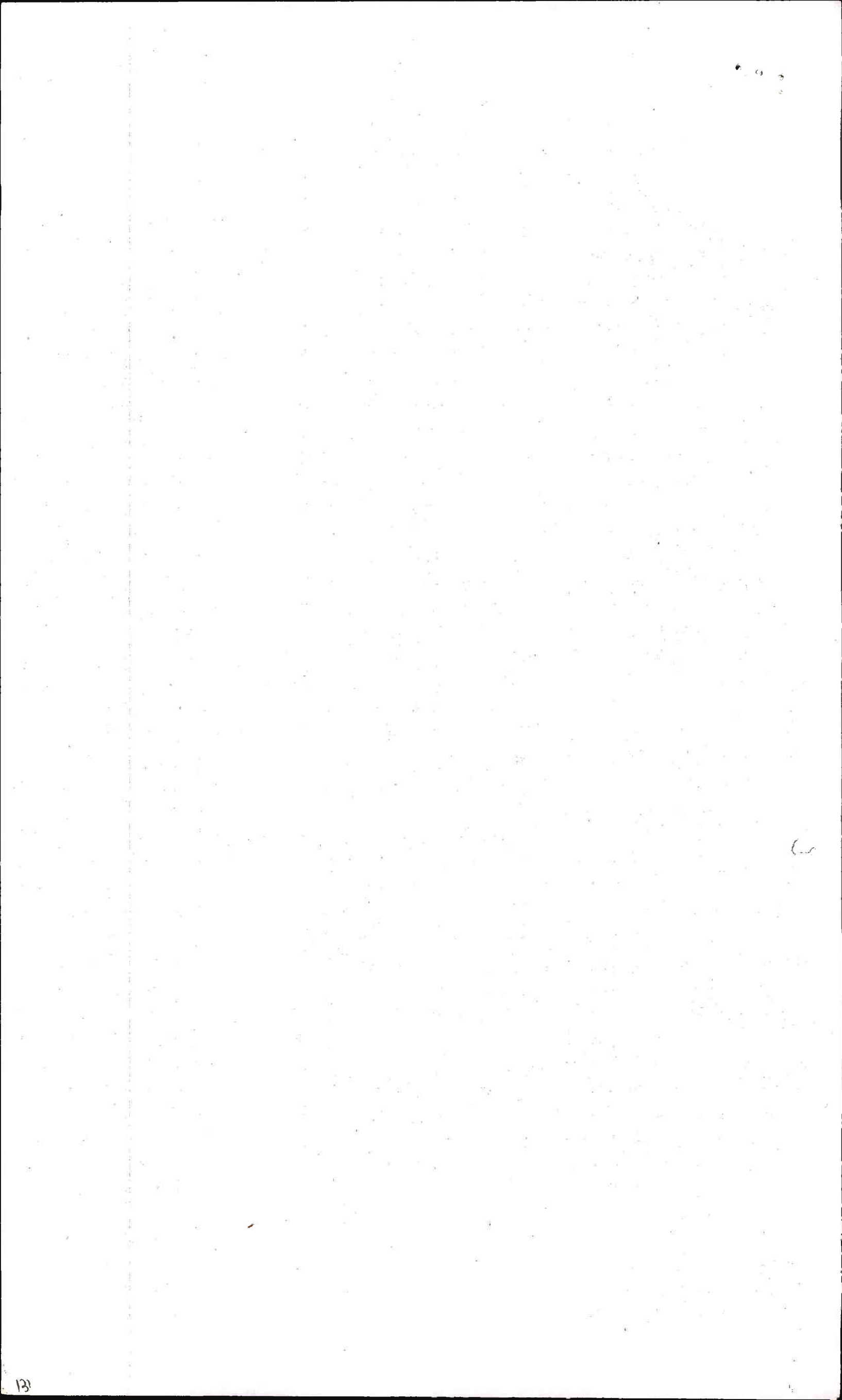


5. Ships taken up from Trade

Serial	Ship	Serial	Ship	Serial	Ship
Liners		Roll-on Roll-off General Cargo		General Cargo	
1.	SS Canberra	19.	SS Atlantic Conveyor	32.	MV Avelona Star
2.	RMS Queen Elizabeth II	20.	SS Atlantic Conveyor	33.	MV Geestport
3.	SS Uganda	21.	MV Baltic Ferry	34.	MV Laertes
Tankers		22.	MV Contender Beacon	35.	MV Lycon
4.	MV Alvega	23.	MV Elk	36.	MV Saxonia
5.	MV Anco Charger	24.	MV Europa Ferry	37.	MV Strathewe
6.	MV Balder London	25.	MV Nordic Ferry	Offshore Support Vessels	
7.	MV British Axon	26.	MV Tor Caledonia	38.	MV British Eagle III
8.	MV British Dart			39.	MV Stena Inspiration
9.	MV British Esk	Container Ship		40.	MV Stena Seagull
10.	MV British Tamar	27.	MV Astronomer	41.	MV Wimpey Star
11.	MV British Tay			Tugs	
12.	MV British Test	Passenger/General Cargo		42.	MT Irishman
13.	MV British Trent	28.	MV Norland	43.	MT Salvagemaster
14.	MV British Wye	29.	TEV Rangatira	44.	MT Yorkshire
15.	MV Fort Toronto	30.	MV Saint Edmund	Cable Ships	
16.	MV G A Walker	31.	RMS Saint Helena	45.	C S Iris
17.	MV Scottish Eagle				
18.	MV Shell Eburna				

Note:

1. In addition MVs Cordella, Farnella, Junella, Northella and Pica were taken up and commissioned as mine counter-measures vessels.



6. Royal Marines

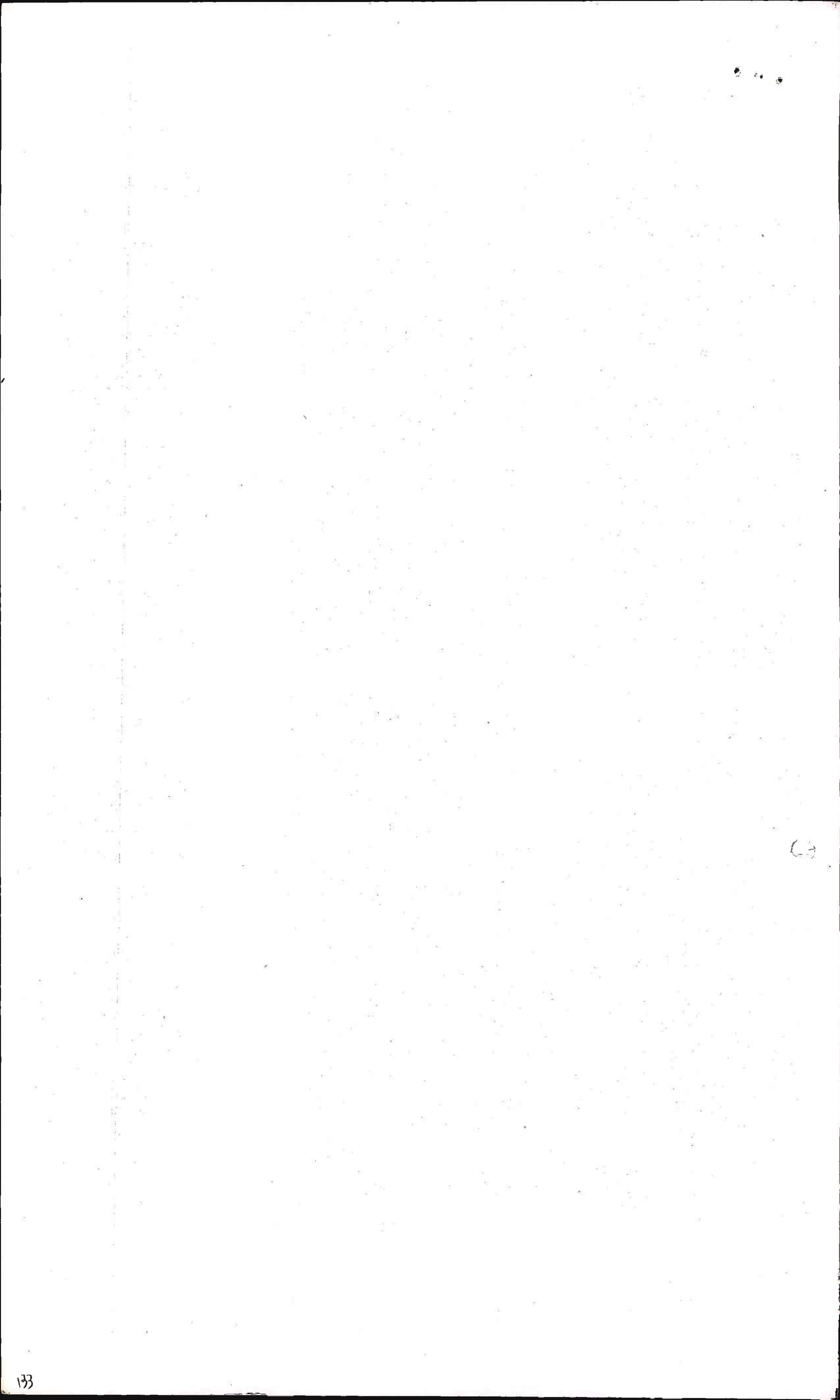
Serial

1. 3 Commando Brigade Headquarters and Signal Squadron Royal Marines
 2. 40 Commando Royal Marines
 3. 42 Commando Royal Marines
 4. 45 Commando Royal Marines
 5. 3 Commando Brigade Air Squadron Royal Marines
 6. The Commando Logistic Regiment Royal Marines
 7. The Special Boat Squadron
 8. Royal Marines Detachments (including landing craft crews)
 9. Air Defence Troop Royal Marines
 10. 1st Raiding Squadron Royal Marines
 11. Mountain and Arctic Warfare Cadre Royal Marines
 12. Y Troop Royal Marines
 13. The Bands of Her Majesty's Royal Marines Commando Forces and Flag Officer 3rd Flotilla
 14. Field Records Office Royal Marines
-

7. Army Units

Serial

1. Two troops The Blues and Royals
2. 4th Field Regiment Royal Artillery (less one battery)
3. 12th Air Defence Regiment Royal Artillery (less one battery)
4. 29th Commando Regiment Royal Artillery
5. Elements 43 Air Defence Battery, 32nd Guided Weapons Regiment Royal Artillery
6. Elements 49th Field Regiment Royal Artillery
7. Elements Royal School of Artillery Support Regiment
8. Elements 33 Engineer Regiment
9. 36 Engineer Regiment (less one squadron)
10. Elements 38 Engineer Regiment
11. 59 Independent Commando Squadron Royal Engineers
12. Elements Military Works Force
13. Elements 2 Postal and Courier Regiment Royal Engineers
14. Elements 14th Signal Regiment
15. Elements 30th Signal Regiment
16. 5th Infantry Brigade Headquarters and Signals Squadron
17. Elements 602 Signal Troop
18. 2nd Battalion Scots Guards
19. 1st Battalion Welsh Guards
20. 1st Battalion 7th Duke of Edinburgh's Own Gurkha Rifles
21. 2nd Battalion The Parachute Regiment
22. 3rd Battalion The Parachute Regiment
23. Elements 22nd Special Air Service Regiment
24. 656 Squadron Army Air Corps
25. Elements 17 Port Regiment Royal Corps of Transport



Serial

- 26. Elements 29 Transport and Movements Regiment Royal Corps of Transport
 - 27. Elements 47 Air Despatch Squadron Royal Corps of Transport
 - 28. 407 Troop Royal Corps of Transport
 - 29. Elements The Joint Helicopter Support Unit
 - 30. 16 Field Ambulance Royal Army Medical Corps
 - 31. Elements 19 Field Ambulance Royal Army Medical Corps
 - 32. Elements 9 Ordnance Battalion Royal Army Ordnance Corps
 - 33. 81 Ordnance Company Royal Army Ordnance Corps
 - 34. 10 Field Workshop Royal Electrical and Mechanical Engineers
 - 35. Elements 70 Aircraft Workshop Royal Electrical and Mechanical Engineers
 - 36. Elements 160 Provost Company Royal Military Police
 - 37. 6 Field Cash Office Royal Army Pay Corps
 - 38. 601 Tactical Air Control Party (Forward Air Controller)
 - 39. 602 Tactical Air Control Party (Forward Air Controller)
 - 40. 603 Tactical Air Control Party (Forward Air Controller)
-

8. Royal Air Force Units

Serial	Flying Squadrons	Aircraft
1.	1 (F) Squadron ¹ Detachments of:	Harrier GR3
2.	10 Squadron	VC 10 C Mk 1
3.	18 Squadron	Chinook HC Mk 1
4.	24 Squadron	Hercules C Mk 1
5.	30 Squadron	Hercules C Mk 1
6.	47 Squadron	Hercules C Mk 1
7.	70 Squadron	Hercules C Mk 1
8.	29 Squadron	Phantom FGR2
9.	42 Squadron	Nimrod Mk 1
10.	44 Squadron	Vulcan B2
11.	50 Squadron	Vulcan B2
12.	101 Squadron	Vulcan B2
13.	55 Squadron	Victor K2
14.	57 Squadron	Victor K2
15.	120 Squadron	Nimrod Mk 2
16.	201 Squadron	Nimrod Mk 2
17.	206 Squadron	Nimrod Mk 2
18.	202 Squadron	Search and Rescue Sea King
	Royal Air Force Regiment	Description
19.	3 (Regiment)	Wing Headquarters Unit
20.	15 (Regiment)	Squadron Detachment Field Squadron
21.	63 (Regiment)	Squadron (Rapier)
	Other Units	
22.	Tactical Communications Wing	
23.	Tactical Supply Wing	
24.	Explosive Ordnance Disposal Team	

Note:

¹ Embarked in HMS *Hermes* and ashore.

(~)

Annex B

Weapons Systems Performance against Enemy Aircraft

Serial	Weapon System	Aircraft Kills Confirmed	Probable
1.	Sea Harrier with Sidewinder AIM 9L Missile	16	1
2.	Sea Harrier with 30mm Aden Cannon	4	2
3.	Sea Wolf	5	—
4.	Sea Dart	8	—
5.	Sea Cat	8	2
6.	Rapier	14	6
7.	Blowpipe	9	2
8.	Stinger	1	—
9.	Others ²	7	1
	Total ³	72	14

Notes:

¹ A probable kill is one where there are reasonable grounds to believe an aircraft destroyed, but there is insufficient weight of collateral evidence to claim a confirmed kill.

² Others comprise 4.5" gun, 20mm, 40/60mm Bofors, Rarden Cannon and small arms.

³ An estimated total of 117 Argentine aircraft were destroyed (including probable and those destroyed on the ground). This total comprises: 45 A4 Skyhawk, 27 Mirage, 21 Pucara, 4 Mentor, 3 Aermacchi, 3 Canberra, 2 Skyvan, 1 C-47, 1 Hercules, 1 Lear Jet, 6 Puma, 2 Bell Huey and 2 Chinook (the last three aircraft named being helicopters).

(2)

Annex C

Ship and Aircraft Losses

Ships

Serial	Date	Ship
1.	4 May	HMS <i>Sheffield</i>
2.	21 May	HMS <i>Arcent</i>
3.	23 May	HMS <i>Anielope</i>
4.	25 May	HMS <i>Coventry</i>
5.	25 May	<i>Atlantic Conveyor</i>
6.	8 June	RFA <i>Sir Galahad</i>

Aircraft

Lost to Enemy Fire

Serial	Date	Aircraft Type	Parent Service
1.	4 May	Sea Harrier	RN
2.	21 May	Lynx ¹	RN
3.	21 May	2 x Gazelle	RM
4.	21 May	Harrier GR3	RAF
5.	25 May	6 x Wessex 5 ²	RN
6.	25 May	Lynx ³	RN
7.	25 May	3 x Chinook ³	RAF
8.	25 May	Lynx ³	RN
9.	27 May	Harrier GR3	RAF
10.	28 May	Scout	RM
11.	30 May	Harrier GR3	RAF
12.	2 June	Sea Harrier	RN
13.	6 June	Gazelle	Army
14.	12 June	Wessex 3 ⁴	RN

Other Losses

Serial	Date	Aircraft Type	Parent Service
1.	22 April	2 x Wessex 5	RN
2.	23 April	Sea King Mk 4	RN
3.	6 May	2 x Sea Harrier	RN
4.	12 May	Sea King Mk 5	RN
5.	18 May	Sea King Mk 5	RN
6.	19 May	Sea King Mk 4	RN
7.	20 May	Sea King Mk 4	RN
8.	24 May	Sea Harrier	RN
9.	29 May	Sea Harrier	RN
10.	3 June	Harrier GR3	RN

Notes:

¹ Lost in bomb attack on HMS *Arcent*.

² Lost in *Atlantic Conveyor*.

³ Lost when HMS *Coventry* sank.

⁴ Lost in missile attack on HMS *Glamorgan*.



